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COMMENT

"The pain in the pocketbook is forcing men to be more intelligent in their work," says ex-Governor Hoard; and his epigram fits the business of farming to a dot. The farmers who are studying and planning and adopting methods suited to new conditions—farming with intelligence—are prospering.

Taking into careful consideration the reduced acreage of wheat and its condition June 1st as reported by the government, crop experts have figured out a total yield of six hundred and forty million to six hundred and fifty million bushels, as compared with seven hundred and forty-eight million bushels reported as the amount harvested last year.

June 19, 1902, the Senate by a vote of forty-two to thirty-four adopted the Spooner Amendment to the Hepburn Nicaragua Canal Bill. This substitute for the bill passed by the House provides for the selection of the Panama route and the purchase of the Panama Canal Company's property rights if a clear title can be obtained, but otherwise the President shall select the Nicaragua route.

If a clear title can be obtained, and also the necessary concession from Colombia, the property is to be purchased for forty million dollars, and the bill provides for one hundred and thirty-five million dollars in addition with which to complete the construction of the waterway. There is hardly any doubt about the House accepting the bill passed by the Senate.

THE IRRIGATION BILL

The Hansbrough Irrigation Bill, which has passed both houses of Congress, provides for the creation of a "reclamation" fund from the sale of public lands in

AFFAIRS OF NOTE AND MEN OF MARK

sixteen specified Western states and territories. The construction of the irrigation-works necessary for the reclamation of the arid lands is placed under the supervision of the Secretary of the Interior.

Under the plan of this bill the reclamation settlement and development of the arid region, proceeding with the sale of its public lands, would be gradual—the work of years—and the competition of its products against the agriculture of the Eastern states would hardly be noticeable. But in the opposition of the farmers of the Eastern states there are fears that the original plan of this measure will soon be supplemented with annual irrigation bills making large appropriations from the federal treasury, and that they may soon feel the effects of a competition rapidly developed by the aid of federal funds collected, in part, from themselves.

CUBAN RECIPROCITY

It appears that Cuban reciprocity measures have been ditched by the "pernicious activity" of the sugar-refining trust. A careful press correspondent who makes an intelligent study of affairs in Congress frankly says:

"The Havemeyer trust has an agent on the floor of the Senate. He is a man of finesse and power. He is the best politician in Congress. At first he set out to get a good reduction of the Cuban duty, and out of that reduction the trust was to demand a share—several snug millions. But when the champions of the Western beet business rose up and waxed strong this agent became cautious. When they threatened to strike off the trust's differential as the price of a lower duty he became foxy. A little mathematical work in New York demonstrated that with only twenty-per-cent reduction and the differential cut off the trust would stand to lose. So this agent resolved that if he could not gain he would at least play his cards so that he should not lose. He would make sure of holding what he had.

"The danger from his point of view was that the bluff of the beet trust would be called and the House bill be passed."

THE ISTHMIAN CANAL

It may be that Mount Pelee has decided the route to be chosen by the United States for the interoceanic canal. Among congressmen the trend of opinion is now distinctly in favor of the Panama route. In a recent speech Senator Cullom, of Illinois, said:

"The action of Congress should rest entirely on the recommendation of the Isthmian Canal Commission, composed of able and experienced engineers and army officers, having no interest in either route. Congress cannot now consistently select any other route, especially when that report and recommendation is sustained by convincing and unanswerable reasons. We are called upon to select between a route one hundred and eighty-three miles long and one forty-nine miles long; between a route costing one hundred and eighty-nine million dollars and one costing one hundred and eighty-four million dollars; between a route which will annually cost three million three hundred thousand dollars to operate and maintain, and one that will cost but two million dollars to operate and maintain; between a route that will take but twelve hours to navigate, and one that will take thirty-three hours; between a route that has been a highway of commerce for four hundred years, and one that has never been used; between a route along the entire length of which there is now in operation a railway worth seven million dollars, and a route with no transportation facilities. For all these reasons the Panama should be selected.

"The United States will have very little trouble in securing any reasonable concessions that we may desire from Colombia. Colombia wants an interoceanic canal constructed through Panama, and that government certainly appreciates now that such a canal can never be constructed until a great country like the United States, with unlimited capital at its disposal, shall undertake the work."

Carroll D. Wright, who has been summoned by the President for consultation in regard to the great coal



strike, was born in Dunbarton, N. H., July 25, 1840. He was a colonel of volunteers in the Civil War, practised law in Boston, served in the state senate of Massachusetts, was chief of the Massachusetts bureau of labor statistics from 1873 to 1888, state supervisor of the United States census in 1880, and in 1885 became the first labor commissioner of the United States. He is eminent as

an author and statistician, and especially so in the field of labor statistics.

Cambridge University recently conferred the degree of LL.D. on the Hon. Whitelaw Reid, the special ambassador of the United States to

the coronation of King Edward VII. Mr. Reid has served on high missions abroad. He was minister to France during President Harrison's administration, special ambassador to Queen Victoria's jubilee in 1897, and one of the five American commissioners to the Paris Peace Conference between Spain and the United States in 1898. Mr. Reid is one of the most distinguished men in the profession of journalism. He was born near Xenia, Ohio, in 1837, and was graduated from Miami University in 1856, taking an active interest in politics and journalism before attaining his majority. During the Civil War he became famous as a war correspondent, and later as an editor and author. For thirty years past he has conducted the New York "Tribune" with signal ability and success.



The Soudan and the Transvaal have made Lord Kitchener, in the minds of his countrymen, the fore-

most British general of the times.

He was a factor of utmost importance in bringing about peace in South Africa. For his services in Egypt five years ago Parliament granted him one hundred and fifty thousand dollars, and for his services in South Africa it has just granted him two hundred and fifty thousand dollars. It is said of Kitchener that he is a man of iron, without the element of heroics in his make-up, who

makes a business of soldiering to win battles, and that while he does not win the affections of men, he commands their profound respect. It is certain that the Boer leaders have implicit faith that Kitchener will carry out to the letter the very honorable terms of peace on which they have laid down their arms.

The recent visit of Governor Sanford B. Dole, of Hawaii, to Washington to confer with the President

about affairs in the islands recalls the eventful days of the revolution and the honorable career of the man himself. He was born near Honolulu in 1844, was graduated from Williams College in 1867, studied law in Boston, returned to the islands, and was appointed to the supreme court in 1887. After the dethronement of Queen Liliuokalani, in 1893, he was elected President of the Republic of Hawaii.

Upon the annexation of the islands he was appointed Governor by President McKinley, and in spite of strong efforts against him by a certain faction in the islands, has been formally retained in office by President Roosevelt.



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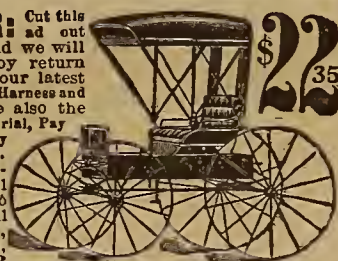
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Mr. Greiner Says:

FRUIT YEAR.—From the present appearances we may well be prepared for a fruit crop all over the United States such as, in its aggregate, has never been known in the entire horticultural history of the country. Yet "there is many a slip 'twixt cup and lip."

CANNING RAW FRUITS.—It is not generally known to farmers' wives that many of our fruits may be canned without cooking, retaining all their natural flavor. We have before this put up gooseberries and rhubarb by just putting in cold water in tight cans. But when you want to have a real treat for winter just mash some strawberries or currants, add an equal quantity by weight of sugar, and put in tight cans. I and my family have had these fruits.

CHEAPER NITROGEN.—A piece of very interesting news comes from Niagara Falls. It is to the effect that experiments have been made here in drawing on the vast stores of atmospheric nitrogen for the manufacture of nitrogen compounds, such as nitric acid, nitrate of soda, nitrate of potash, etc. That these experiments have been so successful and promising that a stock company is being organized, with abundant capital, for the purpose of engaging in the commercial manufacture of such nitrogen compounds, at prices which are expected to be materially lower than have ever been offered, is especially cheerful news to every progressive soil-tiller. To me there is nothing very surprising in this report. Sooner or later we are going to take our nitrogen supply mainly from the atmosphere. Good farmers everywhere have been doing it in a way by the use of leguminous crops. Manufacturers are simply a little behind-hand in this. Even if nothing practical should result from the present efforts made by this company, the problem will no doubt be solved before long.

THE ATMOSPHERE.—A Buffalo paper, probably in a jocular spirit, has entered into speculations concerning the effects that the withdrawal of any considerable quantity of nitrogen for commercial purposes from the atmosphere might have on the creatures who have to breathe the air in which the natural balance is thus disturbed. When the Niagara Falls concern now being organized begins to draw heavily on the atmosphere for nitrogen, resulting in a larger proportion of oxygen than the one fifth now being present in the air, Niagara Falls would become a "lane of laughter," people being continuously drunk on oxygen, so that hilarity, and fast living generally, would be the rule. All these are idle speculation, and not to be indulged in in earnest. Some well-informed people have expressed fears that the use of Niagara River water for power-generating purposes, in tunnels and canals, might materially lower the river, and eventually reduce the mighty cataract to a tame affair. These people can have no conception of the vast volume of water that flows in the old Niagara, in this vast drainage-canal for half the American continent. All the waters drawn off above the falls for all the power schemes now in operation make so small a percentage of the aggregate amount that no diminution of the volume that goes over the precipice has yet been noticed. But what is the volume of water in Niagara River compared with the sea of nitrogen, miles in depth, in which our whole terrestrial globe is swimming! Tons and tons of nitrogen are resting on every acre of land and water. Thousands and millions of tons might (and probably will) be drawn from the atmosphere without any danger of ever making the least impression on the existing proportions between the two elements of which the atmosphere is composed. Good luck to the manufacturers of cheap nitrogen compounds! We will run the risk so far as the air we breathe is concerned!

MEAT AND APPENDICITIS.—The time is most opportune for the new appendicitis scare, and I would gladly do all in my power to help it along. The fallacy of the old senseless claim that appendicitis is due to foreign bodies, especially grape and other small seeds, lodging in the little pocket in the intestines, known as the vermiform appendix, seems to be more and more generally recognized. Now comes an eminent French surgeon (Doctor Champoniere, of Paris), who, having made a thorough and special investigation of the cause of appendicitis, reports (and I believe with good reason) that the prime promoter of that dread affliction is indulgence in excessive meat diet. When the appendix becomes inflamed and enfeebled by disease its valve-like orifice becomes relaxed, and foreign substances drop in. The cause of this inflammation and relaxation in the majority of cases is unquestionably catarrh, or chronic inflammation, of the mucous membrane, beginning in the intestine. This catarrh is a germ disease, the germs becoming colonized upon the mucous membrane. They thrive luxuriantly on animal foods, especially beef-teas and broths of all kinds, while refusing to grow in fruit-juices. Americans are a meat-eating people, and for that reason especially subject to appendicitis attacks. A little scare of this kind, especially now, when excessive prices have put beef and other meats almost out of the reach of people of limited means, comes very handy. Vegetables and fruits are safe, and in an emergency can be depended upon to maintain human life and health without meats of any kind, although a moderate use of the latter mixed in with the main (vegetable) foods will not be liable to do much harm. Farmers are happily situated. They have their own supplies of everything needful, and the more they depend on their own vegetables and fruits, with eggs, poultry and home-grown meats, all used in moderation, and the less they call for butchers' meats, the better off will they be, and the more rarely will cases of appendicitis happen among them.

Mr. Grundy Says:

RAPE.—For many years I have grown Dwarf Essex rape more or less for cow and poultry feed, and it has often come in quite handy. I always sow a little very early to feed to chicks that are shut up during rainy weather, and I know of nothing that is quite equal to it for this purpose. It grows rapidly in rich soil, and makes just the sort of green food that chickens like. For milk-cows I consider sweet-corn the best green food I can grow; but rape can be sown after it is too late to plant sweet-corn, and if the weather is reasonably favorable it will make quite a large quantity of succulent food. The first touch of frost finishes cow-peas and corn, but rape is not injured. It will stand as much frost as cabbage. It succeeds best in a cool, damp soil, and for this reason grows best early in the spring and late in the autumn. If any reader of the FARM AND FIRESIDE would like to experiment a little with it as a fall crop of forage I would suggest that they plow down a strip of stubble just as soon as the wheat is harvested, harrow down fine and smooth, sow the rape about twice as thickly as turnips are sown, then harrow once over. If the soil is slightly damp the plants will soon be up and will make rapid growth. It may be cut and fed as a soiling-crop or be pastured. It is much like green clover in its effect, and therefore must be fed lightly at first. One pound of seed will be sufficient for a trial patch.

TWO KINDS OF FARMERS.—A short time ago we had a rainy day—one of those days that make so many people feel miserable and wish they were somewhere else. The wind blew from the northeast in chilly gusts, and everything had a wet, bedraggled, dreary look. I had occasion to call on two farmers, and thinking that was just the sort of a day to catch them at leisure I wrapped myself up well and drove over to their farms. The first one I called on is one of those rushing, always busy, driving fellows. He is doing fairly well, but doubly earns every cent he makes. He farms entirely by muscle-power, and as he is a strong man he makes things fly; but he reads very little, and is totally ignorant of what is going on in the world. His family appear to have very little interest in the world generally, and but little interest in the farm; their thoughts appear to run principally on the work before them, and bodily ailments. When I arrived he was in the barn with his two little boys, hard at work shelling corn for the pigs, cleaning out the stables, and doing other odd jobs with the same old hurry and rush. "Lots of work to do," said he. "Have a hard time to keep up with it, though we get up at four and never get down before ten. There's no time wasted on this farm, I tell you." Then he began boasting of what he had done, and kept at it until I went away.

At the next house I was met at the door by a boy with a book in his hand. "Pa's asleep," said he. "He always takes a good nap on rainy days. It's nearly time for him to wake up, though; come in and wait a few minutes." On the table I saw copies of three agricultural papers, one magazine and a youth's paper. In a moment the man's wife came in. "John's asleep," said she. "He says he just loves to sleep while it rains. He thinks it rests him more than a whole night's sleep." Then she and the boy and a twelve-year-old daughter chatted about what is going on in the world, and seemed to be perfectly familiar with current events. While they talked the woman patched the boy's shirt and the girl peeled the potatoes for dinner. This man began with next to nothing. Now he owns a good quarter-section of land, is entirely out of debt, and has money loaned out. He says very little, but he knows how to make every stroke of work count. He keeps himself thoroughly posted concerning everything pertaining to advanced agriculture, and he is considered a leader and money-maker. His children are well satisfied with life on the farm, and his two boys are fitting themselves by study and practice for farmers.

I have referred to these two men to show that it is not necessary for a farmer to be a slave to succeed. There are times when he must rise early and work hard, but they are short if he manages right. There is no necessity for a farmer to employ every moment of his time in all sorts of weather. He may have time to rest as well as anybody in the world. It is not the skilful farmer who is always rushed and worried; it is the man who farms with muscle, and allows his brain to become stagnant. The farmer of this day and age must be a reader and thinker if he would be successful, and the boy who desires to become a successful farmer should fit himself for it as carefully and thoroughly as boys are fitted for other skilled vocations. I have poked fun at the clodhopper, and deplored his ignorance; but the clodhopper is not a farmer, he is merely an unskilled laborer. If the farmer wants his son to be something better than an unskilled laborer he should see that he is instructed in the science of agriculture. We have schools and colleges for that purpose now, and they not only teach agriculture as a science, but also inculcate a love for the farm, and impress on the boys the fact that the farmer is an important factor in the world, and entitled to as much consideration as the merchant, manufacturer and banker; that the prosperity of the country depends on his success, and that his success depends largely upon his skill. The farmer must be a reader and a student. Time spent in reading and study is well spent if he applies the knowledge gained to his vocation, and he should see to it that his son is well fitted by both study and practice to farm successfully when he begins for himself. For many years boys have been fitted in schools for all vocations but farming. Now agriculture is rapidly coming to the front, and the farm boys with it, and in a very few years they will stand with the front rank of the world's skilled workers.

All Over the Farm

CLOVER-SEEDING IN JULY

It is difficult for some farmers to realize how farm conditions vary. In a recent gathering of farmers one gentleman displayed a sample of crimson-clover plants grown on his farm. They were twenty inches long, and the root-system showed the greatest vigor. He was an advocate of this clover, and why should he not be? The fact developed that his land is fertile, being devoted to truck, and is rich in humus. This latter means moisture, and with moisture any winter annual can be well started in midsummer. It does not follow, however, that every other farmer can seed to clover in July with sure expectation of success. He can do so if his soil will be retentive of moisture in the right amount. Even if the clover winter-kills, the gain in fertility before winter repays the cost several times over. The common red clover is sown in July with success in some sections. This practice fits into truck-farming, where fertility is kept high, and the removal of the crops leaves the ground fit for seeding without the use of the breaking-plow. Inquiries come to the writer about the advisability of breaking stubble-land after harvest, and seeding to forage or fertilizing crops. Some one has done this, and has gotten a good growth of plants; but the important factor was a soaking rain at the right time, that settled the soil and stored it with moisture. Such rains are far from sure. It is unsafe to bank upon any midsummer seeding in a freshly broken soil. Such seeding is reasonably safe only on unbroken land whose soil is fertile to begin with. The thin stubble-land, with its moisture robbed by the breaking-plow, cannot force growth like the rich truck-patch, that usually furnishes the extra crop enthusiasts exhibit.

CLOVER IN CORN.—For a midsummer seeding I have far more faith in corn-ground than in broken sod or stubble-land. If the cultivation of the corn has been frequent, and the ground has been kept level, there is a fair chance that clover will do well when seeded at the last cultivation. Much will depend upon the weather; but the ground has been worked fine and solid, and that suits the young plants. The corn is using a great deal of the soil-moisture, and in a very dry summer there will be none for the clover, but in seasonable years clover sown in corn may do well. It is my experience that the seed to be used should be divided into halves; one portion should go on the ground ahead of the cultivator, and the other should be sown on the fresh soil. If no beating rain comes, the seed that was covered by the teeth, or small shovels, of the cultivator will make the stand of plants, while a rain will make the seeds upon the surface germinate. But judgment must be used, and I should not risk much seed on thin clay soil. It is the loamy land, rich in humus, that will make the surest catch in corn.

As to varieties there is less choice than many may think. The crimson was largely advertised, but the common red is about as satisfactory for July seeding. I have gotten a fine crop of mammoth in this way; but this large clover is not a favorite with me, as hay is wanted, and the common red is its superior as feed. This comment is only suggestive. If there is land not wanted for fall grain, and needs clover, try seeding at the last working of corn if the soil is one that does not bake, and if the tillage has been level and clean.

THRESHING WHEAT

In our great winter-wheat belt straw is lightly valued. Labor is saved by threshing from the shock, and this year the item of labor is more troublesome than ever. The machines go into the center of the big field, and soon the grain is ready for drawing to the mill or elevator, while the straw is in a huge stack in a place where it cannot be utilized by live stock. Then comes the dealer's opportunity, and that straw is converted into money at a price woefully low to the farmer. The straw has some fertility and a lot of organic matter in it, and the soil is getting old and needs the return of that straw. It cannot be right that this straw leave the farms at the price that ordinarily prevails in the wheat belt. But it is costly business to move the straw to the barn or barn-yard, and I should not undertake much work of that sort. The mistake is in threshing so far from the stock-barn. It would pay in thousands of instances to spend a little more time drawing the wheat to the place in which the straw is wanted after threshing. When it is a large quantity, the small stock-yard should have a basin scooped out, and there should be the stack or stacks. Well-fed stock will eat a great deal of straw when allowed to cull out what they want, and all of the remainder that is not wanted for running through the stable should be rotted in the basin. In the East wheat straw is husbanded like hay, being fed with chop. The Westerner's abundance of corn stover makes this unnecessary; but the farm should not be robbed of its fertility by the sale of straw at one or two dollars a ton in the stack. The question of disposing of the straw must be decided before the threshing. Better draw the wheat up to the barn or stock-sheds, and arrange to convert the straw into manure. When we cease selling straw for a trifle, soils will be impoverished less, and the hay that is marketed will bring a price justifying its sale from the farm.

DAVID.

CLEANING LAND OF WEEDS

It sometimes seems like a waste of time, and a loss of opportunity to summer-fallow land, but it often seems to be the only way of ridding land of foul stuff after it has once gained a good foothold.

In some way hard for me to understand a certain part of my farm a few years ago became infested with wireweed, a species of goldenrod. I never saw such roots on any

plant. They ran out in every direction, sometimes as much as four feet in length, and sent out a million tiny fibers until they resembled a great rope of rootlets. At every little distance new sprouts would strike upward through the surface of the earth and add new plants.

What to do with the field I did not know. I plowed it, but every time I broke one of the roots it seemed as if I added to my troubles, for new plants appeared to spring from the broken roots. I planted the field to potatoes, and thoroughly cultivated it. This failed to overcome the difficulty. All my hard work digging and almost breaking my back pulling the roots seemed likely to fail. It was then I turned to summer fallowing. In the spring I turned the field over, and left it until after haying, when I plowed it again. This was followed by the harrow. Every time I saw the first sign of a weed above the surface I went at it. This seemed to check the growth, for if the stalks could not get where they could take in the air and sunshine they must after a time succumb.

That fall I plowed the field once more, and left it until the next spring. The following spring I plowed it again and sowed it to oats, seeding it down with timothy and clover. This year not a sign of goldenrod or wireweed presents itself. I do not think I will be troubled that way on that land again.

Can we not afford to spend some time and a little extra work if thereby we can rid ourselves of such a pest? The loss of a crop for a year or two is as nothing compared with the gain from having clean fields free from foul stuff.

I believe the same plan will work with narrow-leaf plantain, morning-glory or any of the miserable weeds that sometimes gain a foothold with us. Many times the men who send out our grass-seed are to blame for our having so much trouble. Any man who will knowingly put up and sell such dirty seed ought to be punished severely, and the time will come when he will be.

E. L. VINCENT.

SORREL

Sorrel is among the most troublesome of weeds when once it has gained a foothold. It appears to be attracting more attention in Indiana than formerly, and the following statement has been prepared to answer the inquiries that are now frequently received at the experiment station.

Sorrel flourishes most on sandy soil, where the usual farm crops give only a poor stand. Its presence in a field is generally an indication of limited fertility, and it may become a pest on any thin soil, and especially on sour soils. The farmer with rich fields and clean culture is not likely to notice it.

Sorrel grows about a foot high, with leaves an inch long having a pair of projections at the base of the blade. The leaves are pleasantly sour to the taste. The plant sends out runners just beneath the surface of the ground, which start new plants and bind the whole together in mats. Patches of it are usually conspicuous from the red color of the stems, especially during the flowering-time, and give the fields a red appearance even at considerable distances. It is sometimes called red sorrel, and occasionally horse-sorrel.

There is no direct method of exterminating sorrel; it is too tenacious of life to be easily vanquished. First efforts must be given to cultural methods. A succession of hoed crops, if extra care is taken to let no plants escape destruction, will greatly reduce the numbers; but plants at the edges of the field and seeds in the soil will be likely to restock the ground. It is generally in pastures and cloverlands that the weed is the greatest pest, where it is not always expedient to use the plow.

But whether the ground is under the cultivator or in sod, chief reliance must be had upon means for increasing the fertility. The land must be made to grow good crops by using manure or chemical fertilizers. In this way the weed is choked by the other plants, and although it will not be exterminated, yet it is so much reduced as to no longer give trouble.

In this connection the use of air-slaked lime is especially to be recommended in addition to the fertilizers. Lime has had a reputation in this connection for a long time, and recent experiments confirm the opinion. Its application will do no harm to other crops, and is usually decidedly beneficial to them. It is a corrective for acid soil, improves the mechanical condition of stiff soils, and makes the natural fertility of the ground more quickly available. It should be applied on sorrel-infested fields at the rate of one to five tons an acre.—J. C. Arthur, in Bulletin of the Indiana Experiment Station.

CROPS IN DRY SEASONS

At the recent farmers' convention at Knoxville, Tenn., Mr. Terry spoke upon "Growing Crops in the Dry Season." He demonstrated that it was not a difficult matter if one has plenty of humus in the soil. He announced that upon his farm he could grow a good crop of potatoes without a single particle of rain from the time he plants them to the time he finishes cultivation. To have humus, which acts as a sponge and holds the moisture in suspense, and then frequent and shallow cultivation, which prevents the moisture from escaping, one can certainly grow crops under conditions which mean failure to the majority of farmers. The capacity of a soil filled with humus to retain moisture through a drought is very great. The farmer needs only to take advantage of natural laws. Mr. Terry enforced certain well-known facts with illustrations drawn from his own experience in a way both convincing and delightful. His addresses did a world of good, and will not soon be forgotten.—The Breeders' Gazette.

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AN EXPERIMENT IN SOILING

A FIELD of growing alfalfa affords very rich pasturage, and this would be valuable for dairy purposes if it were not for the danger of the cows bloating. If conditions were always the same it might be possible to devise some method by which the danger could be obviated. But the conditions, both of the animal and the pasturage, are subject to change, and no live-stock man can risk his stock with impunity. Alfalfa when eaten with a heavy dew on the foliage is very dangerous to the ruminating animal that eats it. Moisture from rain has a similar effect. It is also very dangerous to turn animals out upon green alfalfa early in the spring when the plant is very succulent.

In view of these conditions the agricultural department of the Colorado Agricultural College, under Prof. B. C. Buffum and his assistant, Prof. C. J. Griffith, is just undertaking some interesting experiments in soiling. They have selected from the college dairy herd some Jerseys, Shorthorns and common cows for the trial. These cows are not allowed to graze, but are kept in their paddocks and fed on alfalfa cut from an adjoining field twice each week. The cows are given three feeds of alfalfa daily, with a small ration of bran added. The cows are given all the water they wish to drink. The alfalfa is cut when dry, and is carried immediately into the sheds, where it is piled up and fed out as needed. The experiment has now been going on some time and no ill effects of alfalfa-feeding have thus far been discovered. On the contrary, the cows have done exceedingly well, and have given an increased flow of milk all around.

It is the opinion of Professor Griffith, who has the experiment in charge, that it will prove not only a safe, but an economical, method. Of native pasturage it requires from three to four acres to afford sufficient feed for a single dairy-cow, and the cow is forced to graze almost continually in order to get her fill, thus diminishing her milk-producing capacity, whereas it is expected that a single acre of alfalfa will afford ample feed for four cows under the new method. At the same time the method surrounds the cows with the best possible conditions for the production of milk. The animals are afforded an opportunity to eat, drink and take rest or exercise at will.

The method also has another economical phase. The pasturing of an alfalfa-field is always attended with more or less loss to the plant-growth. The almost continual tramping, the lying down of the cattle, the effete matter from the animals, are the principal causes of the waste. Under the new method there is no such waste. There is nothing to retard the growth of the alfalfa. The alfalfa is cut in strips as needed, and by the time a plat is cut over once that part that was first mown is in shape for mowing again.

H. A. CRAFTS.

ALFALFA

Among the many good things in the FARM AND FIRESIDE I notice articles relative to growing fodder for stock. With us farmers the question is, "What crop or forage-plant will give us the most feed, no matter what the weather may be?" In this state, Nebraska, where drought cuts the fodder short some years, we have tried all kinds of grasses and fodder-plants, such as sorghum, Kafir-corn, clover, timothy, millet and alfalfa, and I must say that no crop named will produce as good results as alfalfa.

I have grown alfalfa for several years, and now have a fine meadow of twenty-five acres. I will give my method of growing this valuable plant. Many of my neighbors have tried to grow alfalfa, and failed from one cause or another, and say that it is not sure to grow. They either sow some grain with the seed or turn stock onto pasture the first year and kill the plant before it has a good root.

Alfalfa is the king of all fodder-plants for both dry or wet seasons. It can be grown at less expense, for the amount of fodder produced, than any plant grown.

After a meadow is once started one can feel certain of four crops of fine hay every year. Many have fields that have grown four crops each year for twelve years, and now we see better hay than when first sown. In fact, it is a permanent meadow.

Taken all around it is the best hay for stock that is grown, for all stock are sure to leave any other kind of feed for alfalfa. One can fatten hogs on alfalfa if finished off with a six-weeks' corn ration. Sheep will fatten on alfalfa alone. It is the best milk-producer.

If the hay is not cut until the blossoms are nearly gone it is best for horses, but for other stock we get the best results from cutting as soon as it blossoms.

To grow the plant successfully here one must prepare the seed-bed the same as for wheat. Plow deep and harrow until the soil is fine and well packed. Sow twenty to twenty-five pounds of seed an acre with a press-drill, mixing an equal amount of meal with the seed if the drill sows too fast. Plant the seed two inches deep, so that a good root will be started as soon as the plant appears above the ground. Do not sow any other grain or seeds with it, and roll the ground hard as soon as the seed is sown. This prevents dry weather from pinching the plant.

As soon as the weeds have grown eight or ten inches high run the mower over the field, cutting two or three inches from the ground, letting the refuse remain on the ground as a mulch.

The plant forms a head at the surface of the ground, and from this head many shoots branch out. As soon as one shoot is cut off others branch out from the head, and one can often find fifty to one hundred shoots from one plant. As many as one hundred and

In the Field

twenty-five have been counted from one root that was one and one half inches in diameter at the surface of the ground.

If the weeds get too large, and are going to seed, cut off with the mower two or three times during the season.

One must not expect any income the first year, but in all years thereafter we get our reward of three to five crops each year. Last year our meadow was ready for the mower June 1st, and we harvested two and one half tons an acre of the very best hay. We cut all we can in the forenoon, and rake into small windrows in the afternoon, so that the hay will not get too dry, as the leaves fall off the dry plant very badly if cut too ripe or allowed to dry too much before raking.

Allow the hay to cure in the windrow for a day, and then pile into small piles, leaving these piles until the hay is cured for the stack or mow. It was just five weeks after the first crop was cut before the second crop was ready for the mower; and as we had a dry spell of weather that cut our corn to half a crop, I expected a short hay crop, but we got one and one half tons to pay our expenses. Five weeks after the second crop we were in the field for the third time, and September 25th we cut our fourth crop, getting in all over six tons an acre in one year.

In former years we had four crops a year. One can see that we have a permanent gold-mine.

If we allow the crop to go to seed the first of the season we can get two crops of hay after the seed is ripe. The yield of seed is from two to four bushels an acre, valued at six dollars a bushel.

After the first year no weeds can grow in the meadow, for frequent mowing will kill all weeds.

Many farmers have been trying in a small way to grow alfalfa, and have failed on account of sowing oats or wheat with it, so that they would not lose a crop of something. Others would pasture the first year, and the plant would winter-kill. But by waiting one year it is the strongest plant we have, for the roots go down many feet into the ground.

The plant will grow in any soil except where water stands for several days. M. M. HALLECK.

INTENSIVE FARMING

It would seem that the last word had certainly been said in the matter of corn-cultivation and stock-feeding, and that all worth printing on the subject had already been published, but I plead as an excuse for again bringing up the subject that I have never seen similar methods described in print. The ways and methods of a practical farmer who accomplishes more with the same means than his neighbors are to-day studied with care, and often imitated with profit.

The "paper farmers" are all right in their way, and no doubt do their share in building up the business and uplifting the plane of the occupation of farming, but the practical, hustling man who does instead of talks is the one we most readily follow. These methods are those of a farmer residing in eastern Indiana, too modest to have his name published, who ten years ago had not enough capital to stock a farm with implements, much less buy the farm itself. To-day he is the owner of one hundred and sixty acres of first-class land, and has surrounded himself and family with all the requirements of this luxurious age. His fidelity to agriculture and his belief in it as a money-making, health-giving occupation mark him an enthusiast, but an extremely practical one.

He plants every year about sixty acres of his farm in corn. He is an apostle of good and thorough farming, rather than tremendous farming; he is an intensive, rather than an extensive, farmer. He has not failed in many years in raising one hundred bushels of corn an acre, and last year his crop averaged one hundred and twelve bushels. His land was not extraordinarily rich in the beginning; not more so than tens of thousands of acres yielding less than half that amount to the satisfaction of their owners. He pursues the sensible method of returning to the soil the chemical properties taken off by the corn, while his neighbors usually give no heed to that question. He uses fertilizers that cost much less than the value of the increased crop-production, and by practising this sensible course not only keeps up his land and raises immense crops of corn from the same fields every year, but actually increases the fertility of the soil.

When the ground is broken up the plows are set very deep. The ground is put into the very best condition possible. The corn is drilled twelve inches apart in the rows, and very shallow, not to exceed half an inch in depth. The idea is that the strength of the early plant is to nurture the roots of the corn, which penetrate downward in search of the moisture which must sustain the plant to maturity. If the seed is put into the ground too deep the strength of the plant will be expended in sending the shoot up into the air and sun at the expense of the downward-thrusting roots.

As soon as planting is over he commences to cultivate. The earth is stirred to a shallow depth, and kept open, so that the sun and air may penetrate, and the moisture be coaxed up from the depths to water the roots of the young plant. This is a very important stage in the growth of the young plant. Shallow cultivation is carried on at brief intervals until the corn

becomes so large that the double cultivator can be used no longer, when it is continued with a single-horse implement. This manner of cultivating the corn—frequent, shallow and thorough—is kept up until the ears of corn are so large that the horse in passing frequently breaks one off. Then the work is stopped and the field given a short period of rest.

After cultivation ceases is the time when careful and systematic search is made for barren stalks, for it has been learned that in order to produce such immense crops every stalk must mature an ear, and many of them two. The entire field is gone over row by row, and this work is never trusted to any one else than the proprietor himself. Every barren stalk is cut out. This process has been continued for several years, until the seed is practically pure. The purpose in gleaning out the barren stalks is to prevent the pollenization of bearing stalks by barren ones. There is a pollen on the barren stalks as well as on the bearing ones, and the effect of the two mixing is to reduce the yield of the bearing stalks next year, and not cause any ears to grow on the barren ones. By following this plan for some years the corn has been practically freed from barren seed. In a field adjoining this model corn-field at least twenty per cent of the stalks were barren last year, and there is no doubt that hundreds of farmers would find the same condition. In order to grow one hundred bushels to the acre it is absolutely necessary that every stalk produce a good ear, and also that they stand close together.

As soon as possible after the corn is laid by, and long before it is dry enough to crib, this farmer goes abroad in his field and examines the grain in the yet green husk, to ascertain if the stage has been reached when the stalks may safely be cut up and shocked. It requires some knowledge to determine just when it is fit for this process. It must not be before the grain is fully formed, nor must it be delayed until after the shrinkage begins which follows fruition. It must be at that stage in its growth when it is too hard for roasting-ears and before the husk has begun to dry. When that stage is reached the corn is cut up, about a foot above the ground, and put into shocks so small that as many as sixty to seventy stand on an acre.

The natural juices of the plant are all in the stalk at the time described. By drying rapidly in small shocks these juices are retained, and greatly enhance the food value of the stalk. It is when corn is cut and cured in this way, and economically utilized, that it justly acquires the title of king of all grains.

Just as soon as the corn in the shocks becomes dry enough to crib it is husked out and the fodder taken to a shredder and torn up in the manner familiar to all farmers nowadays. The manner in which this shredded fodder is prepared, however, is the secret of much of this farmer's financial success. Every particle of food raised on his farm is fed on the place, and as many as two hundred hogs and sixty head of cows are fed from the products raised there.

When the fodder is shredded it is taken to an empty mow in the barn, over the floor of which a layer of clover hay has been spread to the depth of a foot. Over the layer of hay the shredded fodder is spread to an equal depth, after which hay is again laid over, and then another layer of fodder, and so on until the mow is full or the fodder disposed of. The clover hay absorbs the moisture in the green fodder, thus keeping it all sweet and pure. When taken from the mow a hay-knife is used to cut down through all the mass, after which the hay and fodder mixed as described is run through a cutting-box and cut into one-half-inch lengths. This is then cast into a big feed-box and evenly mixed. Ground grain is then thrown over it, and after it is thoroughly mixed it is wet and salted. This food is given to horses and cattle, and much of the time to hogs and sheep. Every bit of it is eaten and thoroughly assimilated, and consequently every particle of the crop is saved. There is no waste on this farm. All of the farm-animals except the hogs, and they part of the time, have their food prepared in this manner. Every bit of the corn-growth is fed, and nothing wasted. This enterprising farmer feeds no grain whole except to poultry. Neither does he feed the corn ration alone, but prefers to mix the ground corn with ground oats, rye, mill-stuff, shorts and bran. The meals mentioned mixed together supply the properties horses and cattle require, especially the milk-cow, which is expected to yield a large supply of pure milk.

This farmer is not one of the purely theoretical ones; not one of the paper kind so often found making foolish claims and offering advice to men who know their theories must fail. He is a practical man, who has actually done all the things which has made him a leader among his class. He has grown wealthy by farming intensively, and urges all farmers to leave off attempting to farm more than they can cultivate well.

Sixty head of milk-cows, three bulls, ten head of work-horses, two driving-horses, a pony and from one hundred and fifty to two hundred head of hogs are fed on this model farm of one hundred and sixty acres, and not a dollar is spent for feed that is not produced on the farm.

The large number of cows mentioned suggests the idea that the business of supplying milk and cream to the city is the principal one, and that is correct. That is the main business of this farm, but in addition one hundred and fifty to two hundred head of hogs are fattened every year on the surplus milk and other products of the farm. The thoroughly prepared food causes the cows to give such excellent milk that it brings every day in the year twenty cents a gallon at the farm. C. M. GINTHER.

Gardening

By T. GREINER

A REGRETTABLE BREAK in the continuous supply of good things from the garden will be the sure penalty of forgetfulness in the matter of sowing and planting for succession. We have use for the seed-drill every few days.

HERBS.—If you like any of them, they are easily grown, and the directions for the culture of one fit most others. Sow the seed thinly in shallow drills in good soil, and treat like any other close-planted garden crop.

TRAPPING THE MOLE is about the only practical way of getting rid of the animal. It often does far more injury by its habit of burrowing in mucky or sandy garden-spots or meadows than it does good by devouring grubs and worms. In one way it is a benefit; in another, a nuisance.

SOME SCATTERING BARLETTA ONIONS left in the patch over winter where grown last year gave me a supply of early green onions before the garden was plowed the past spring. It suggests the advisability of trying Barletta, or Early Queen, for an onion to be sown in open ground in August for early spring bunching purposes. I believe this Barletta is hardy as an oak.

FLOWERLESS PLUMS.—C. O. N., Waverly, Neb. I cannot reconcile the tree-leaves with the flowers which you sent me. The foliage is undoubtedly that of some plum, or at least of some prunus, while the flowers appear to be those of some pyrus, and I think are those of *Pyrus arbutifolia*; the latter, however, makes only a small tree at the best, and is generally merely a shrub. In your letter you do not state that you are sure the flowers came from the tree of which you sent me the leaves, but say you picked them up under the tree. There are so many reasons for the barrenness of certain plums that it is out of the question for me to definitely answer your inquiry without more definite knowledge.

EARLY PEAS.—Among early peas I have not yet found anything to take the place of our older Alaska. This is comparatively hardy, a thrifty grower and earliest bearer, and the peas are about as good in quality as the average wrinkled pea. When picked at the right stage—that is, when the pods are well filled, before the peas get hard—the Alaska is tender, sweet and enjoyable, and altogether different from the peas one finds on the tables of the average run of hotels or restaurants. I always eat my fill of my own Alaska, but seldom take more than a taste of the green peas on the restaurant table. The great advantage of the Alaska is its reliability as a cropper. It has never yet failed to give me a good crop on good soil. It rather likes rich soil, although I have grown fair yields on poor soil when well fortified with dressings of potash and phosphate. On the other hand, I have tried time and again to grow satisfactory crops of Nott's Excelsior and American Wonder, and usually failed to grow plants enough for a crop. Except on the very richest soil they remain dwarfs both in growth and yield. So I still stick to Alaska.

PARSNIPS.—How I did enjoy my frequent messes of fried parsnips this spring! They were just delicious, coming right at a time when the supply of fresh vegetables was shorter than at any other season. Home gardeners often neglect to plant a patch, because the time when they will be ready for the table seems a long way off, as they are usually not wanted until close up to another spring. But they give us so much less trouble than other root crops, so far as winter keeping and storing are concerned, that we might well grow them plentifully, and for stock as well as for the table. A reader in Benton, La., asks me whether there is any "secret process" in planting parsnips. Time and again he has planted the seeds, with a most dismal failure. The secret of success is absolutely fresh seed. Seed will not grow the second year. To make sure of having seed that will grow, the best way is to plant a few roots in the spring or leave them in the ground where they were grown and gather the seed from them ourselves. It is an easy task. The seed-heads are to be cut off when most of the seeds in them have reached full maturity. Dry them on sheets, and then thresh or strip off the seed, and clean by picking out the stems and rubbish. The best soil for parsnips is a clean, rich loam which offers no obstruction to the equal expansion of the roots. Prepare it as you would for beets or carrots or any other garden crop. Sow the seed in early spring, preferably with a garden-drill, one half inch to one inch deep, in rows fifteen to twenty inches apart, and thin the young seedlings promptly to stand three to four inches apart, at the same time pulling up all weeds in the row. The free use of the hand wheel-hoe will keep the entire patch clean until the entire ground is covered by foliage, when further cultivation may cease. The varieties are not many. For shallow, stony or otherwise unfavorable soil there is the Round or Early Short Round; for better soil the Half Long, Student or Hollow Crown, and for deep, clean soil the Long Smooth. The plant seeds freely if left in the ground, and the seed being light, some of it is easily blown about by the wind, and will find a foothold in fence-rows or waste places, and there grow and produce plants, roots and seeds again. The roots of the wild plant are generally hard and inedible, and are poisonous, but when cultivated finally become fleshy, palatable and nutritious.

VINE ENEMIES.—Sometimes I wonder that after so much has been said, written and published about the best ways of keeping melon, cucumber and squash vines free from bugs and beetles, the information has not yet reached more than a small proportion of the people who grow such things, and so much damage is yet done to these plants by their insect foes. Sometimes even the better-informed ask questions about these bugs and beetles, in the hope that new ways of dealing with them have been discovered. Unfortunately this is not the case, and we have to try to work out our own salvation on the same old lines. The best way, of course, is to plant vine crops where the bugs will not be apt to find them—in new fields; but this plan is not available for old gardens or in fields near spots where vines have been grown before more or less. In a cool season the yellow-striped beetle sometimes seems to be entirely absent, when all at once, on a warm day usually following after a rain, these unwelcome visitors appear in swarms, and take whole plantings of vine crops without mercy, and in a very few days. The protection, or colonization of toads and snakes in vine-patches is always to be recommended. The next best thing is to try to hide the plants by mechanical means, such as boxes or screens, or possibly by other plants started around them, such as radishes, lettuce, cresses, etc., or to scent them in a manner which is distasteful to the bugs. One of the oldest, and often quite useful, devices is to make a mixture or solution of cow-manure, poultry-droppings, etc., leave this out in the air and sun until it develops a powerful smell, and then dilute it with water and sprinkle the water freely on the plants to be protected. My old favorite practice is to apply tobacco-dust and bone-meal by handfuls around the plants of each hill. It has proved a sure means of repelling the squash-borer, fairly effective in repelling the striped-beetle, and to some extent the large black stink-bug. This year I am trying to keep these enemies off by surrounding each hill with a ring of superphosphate, a handful or two to each hill. To keep the vines sprayed with Bordeaux mixture and Paris green will be apt to have some good results in the direction of keeping flea-beetles off, and the vines free from disease, also to some extent of poisoning a portion of the yellow-striped beetles.

Fruit-Growing

By S. B. GREEN

AUTUMN SOWING OF PINE-SEEDS

FOR many years I have raised evergreen seedlings, but have made the almost uniform practice of sowing them all in the spring except red cedar, which I always prefer to sow in the autumn. Last year, however, I was persuaded by a friend to try the sowing of bull-pine seed in the autumn. My land here is packed so hard in winter that it is not well adapted for fall-sown seeds, as such a crust forms that frequently the seedlings cannot get through it. To obviate this difficulty I mixed a large amount of sand in the surface-soil of the bed, and after sowing the seeds broadcast and covering them about half an inch deep with sand and soil, put on fully an inch of clear sand, and as a result I have this summer a beautiful lot of pine seedlings which are a surprise and delight.

PEACH SEEDLINGS TRUE TO NAME.—M. C. B., Marengo, Iowa. While there are a few peaches that come true from seed, yet neither the Elberta nor the Crosby belongs to this class. At the same time, either one of them will probably produce seedlings that would bear fairly good fruit, and of course it is quite possible that they would produce something better than the original stock.

DUST-SPRAYING is a term which has recently been used by some makers of modified forms of bellows which are intended to take the place of the ordinary spraying-pumps. These machines can often be used to good advantage for the application of Paris green, pyrethrum and similar material, and on a small scale they would often be found more convenient than the ordinary spray-pump; but for the market-gardener or fruit-grower who has a considerable surface to go over a first-class spray-pump will be found much more convenient. While there is a form of Bordeaux mixture that can be applied as a dust, yet it is not nearly so satisfactory as the liquid form, and is much more expensive.

A CHESTNUT GROVE.—T. J. F., West Plains, Mo. The easiest way for you to start a chestnut grove on your rocky ridge is to buy one-year seedling chestnut-trees and plant them in favorable locations. Of course, it will not do to pasture the land where such trees are set out until they have become large enough so that the cattle cannot reach the foliage, as they are liable to browse them. The seedlings should also be watched for a few years until they get nicely ahead of the brush around them, and if it is found that this is crowding them too much it should be cut away in June or July from near the chestnut-trees. It may be best, after the trees have started, to graft or bud them with some of the best Japanese or European chestnuts. Chestnuts are of easiest culture, and may be planted the same as any other tree.

DEWBERRY CULTURE.—T. B. S., Scotia, Neb. Dewberries seem to be quite fickle, anyway the conditions necessary for the best results with them are not well understood. In some locations they do extremely well, then again they are very unproductive. I think probably the best treatment for them is to plant them in hills four feet apart in rows seven feet apart. In the spring of the fruiting year trim them, stretching wires over the plants, about eighteen inches from the ground, and lift the plants up over the wires, so that when they bear the fruit will be off of the ground. Where they do well they are of the simplest culture, but in some situations no treatment will make them productive. The cultivation should be much the same as for blackberries. The pruning should not be done until the plants come in flower, and should consist of removing the dead fruit and enough of the blossoming shoots to prevent their overbearing.

LASTING FERTILIZERS FOR GREENHOUSES AND ORCHARDS.—W. S., Philadelphia, Pa. I think that generally the best results from the use of commercial fertilizers in greenhouses are obtained from those that are quite soluble, and that it is better to apply such fertilizer frequently in small quantities than to use some kind that will not be available to the plant for a considerable time. On this account I have recommended the use of nitrate of soda as a supply of nitrogen; muriate or sulphate of potash and a superphosphate as a supply for phosphoric acid. But to answer your question I think for a lasting fertilizer I should use fine ground bone, which furnishes both nitrogen and phosphoric acid, and muriate of potash in the proportion of two parts of bone-dust to one part of muriate of potash. Where I am located it is cheaper to use tankage instead of bone-dust, but, like bone-dust, it is a rather slow-acting fertilizer. About four hundred pounds to the acre is a good dressing of bone-dust or tankage. For leaf crops—and by this I mean spinach, lettuce, cabbage, etc., where they are grown in frames—I prefer to use nitrate of soda. In my experience in the greenhouse I find that I can get five times as much growth on spinach and lettuce by the use of nitrate of soda as I can by the use of large quantities of the best stable fertilizer.

TRAINING GRAPES.—H. V. D., Asherville, Kan. The best method of training grapes calls for some little study. I would suggest that you get a book entitled "Grape-Training," by Bailey. I think it costs about fifty cents, and is sold by the Orange Judd Publishing Company, New York City. The best way to train grapes the first year under any system is to allow them to lie on the surface of the ground, as I think the wood ripens better in such position than it does on a trellis. At the beginning of the second year a trellis of some sort should certainly be provided. Some of the points to be borne in mind in pruning grapes under any system are the following: (1) The old wood which has borne fruit once never bears again. (2) The wood that is formed one season produces the bearing wood for the next season. (3) If all the new wood is left on the vine it will bear ten times more clusters than it can properly develop, and they will all be small and imperfect. (4) If nine tenths of the new wood is cut away, leaving only from three to six buds to each stalk, the yield of good grapes will be much increased. For the average vineyardist probably what is known as the fan system of training is most desirable; in this two or more canes are trained to a trellis six feet high, and having at least four wires.

RESURRECTION-PLANT.—L. J. K., Aetna, Pa. The so-called resurrection-plant is known in botanical terms by the name of *Anastatica Hierochuntina*, which name means resurrection-plant. It is a native of the sandy deserts of Arabia and Syria to Algeria. It is an annual and grows about six inches high. Soon after flowering the leaves fall off and the branches become woody and roll up into a ball, reminding one of wickerwork or lattice. Inside the ball are the seeds, which are near the tips of the inrolled branches. The plants are then uprooted by the winds, and are blown about on the deserts. When the winter rains come down, or when the balls are blown into the Mediterranean, the branches at once open back and the seeds germinate very quickly. The dead plants do not, of course, come to life, but they retain their power of shrinking and opening for many years, and they may be dried and wetted many times. They are a sort of tumbleweed. You will note by this that they are small, dead plants, and that you could not grow them on if you would. They are often sold by fakirs and dealers in novelties, and many attempts are made to grow the plant. This plant belongs to the cress family. There are a number of other plants found in this country which are called resurrection-plants, but the one which I refer to is the most common one.

Live Stock and Dairy

BUTTER-MAKING AT A PROFIT

During last summer, in the city nearest my home, farm or ranch, butter sold at from fifteen cents to eighteen cents a pound in trade; while a few very good butter-makers had private customers, from whom they got as high as twenty-two cents a pound, the majority of the butter from the country was sold at the stores at about fifteen cents a pound in trade, with little demand.

I started milking about twenty cows in the spring, making butter one of my chief products. I had to pay a milker thirty dollars a month and board, and he did very little besides the milking and feeding the calves, and with fifteen-cent butter there was little prospect for profit.

I took a few loads of butter to town at the start, and although it was pronounced very good, I could not get a higher price than my neighbors, so I went home and considered the subject pro and con. The result was, I mortgaged my twenty cows for two hundred dollars, and sent for a separator, butter-worker, butter-print, parchment-paper with an attractive cut printed on it, giving my dairy a good name, and also the location of the dairy.

As soon as the things arrived I set to work, and found it not so difficult as I had imagined it would be to understand and operate the separator; and after once using the butter-worker no one will work butter by hand again.

The cream from the separator I allowed to cool, then placed it in a moderately warm room and ripened it as rapidly as possible, generally churning it within thirty-six hours after milking in warm weather. My cows were not extra good ones, but I averaged from one hundred and thirty to one hundred and fifty pounds of butter a week.

When the first week's butter was ready for market it presented a far better appearance than the lots I had first taken in, which were in two-pound rolls wrapped in butter-cloth. My print was for one-pound bricks, the same size as the regular creamery-butter, and I packed them tightly into boxes I had made to hold forty-eight pounds each. Each box had a tight lid.

I took this butter to the store that catered to the very best trade of the city, and demanded five cents a pound higher than they were giving for creamery-butter that was being shipped in, and guaranteed them a certain amount every week. They gave me my price—in cash; of course, I did my necessary trading with them.

While my neighbors were finding it difficult to sell their butter at fifteen cents a pound I was getting twenty-five cents, and had a sure sale for all I could make. During the fall I got thirty-five cents, and part of the winter as high as forty.

I cleared about one hundred dollars a month right along from butter, butter-milk and Dutch cheese, and found that my calves did much better than they had before I got the separator.

G. B. T.

EXACTNESS IN DAIRYING

Dairying is not one of the exact sciences, but we are learning that a greater degree of exactness in the various operations of the dairy will materially increase the margin of profit.

Certain questions are frequently asked, such as, What is the temperature at which we shall churn? What per cent of fat should good milk contain? While exact figures cannot be given that will fit all cases, the following may be suggestive and helpful:

The temperature of the milk is as follows:

| | |
|---|--------------------|
| When drawn..... | 98 degrees |
| For shallow setting..... | 60 degrees |
| For deep setting..... | 40 to 45 degrees |
| For separator..... | 85 to 95 degrees |
| For ripening cream..... | 65 to 75 degrees |
| For churning..... | 50 to 60 degrees |
| For milk for city delivery..... | 45 to 50 degrees |
| For milk for calf-feeding..... | 95 to 100 degrees |
| For reading test-bottles..... | 120 to 140 degrees |
| Skim-milk starter set at 90 degrees; keep above 75 degrees; if necessary warm up after 6 to 10 hours. | |

The time:

| | |
|---|-------------------------|
| For cream to rise in shallow pans..... | from 24 to 36 hours |
| For cream to rise in deep pans..... | from 12 to 24 hours |
| For cream to ripen..... | from 18 to 24 hours |
| For churning ripe cream..... | from 20 to 40 minutes |
| For first whirling of test-bottle..... | 5 minutes at full speed |
| For second and third whirling of test-bottle..... | 1 to 2 minutes |

The per cent of fat:

| | |
|-----------------------|-------------------|
| Average milk..... | 4.0 per cent |
| Guernsey..... | 5.4 per cent |
| Jersey..... | 5.2 per cent |
| Shorthorn..... | 4.1 per cent |
| Ayrshire..... | 3.7 per cent |
| Holstein..... | 3.4 per cent |
| First milk drawn..... | 0.8 to 2 per cent |
| Last milk drawn..... | .5 to 12 per cent |
| Rich cream..... | 35 to 50 per cent |
| Commercial cream..... | 20 to 25 per cent |
| Butter..... | 83 to 88 per cent |

The loss of fat should not be over:

| | |
|-----------------------------|---------------------|
| In dilution skim-milk..... | .7 to 1 per cent |
| Shallow-pan skim-milk..... | .5 to .7 per cent |
| Deep-setting skim-milk..... | .2 to .5 per cent |
| Separator skim-milk..... | .03 to .05 per cent |
| Butter-milk..... | .1 to .2 per cent |

TEMPERATURE.—The temperatures given for milk set in deep cans are lower than can be obtained without ice. It is necessary to set immediately and cool quickly, however, if the best results are to be secured. If a temperature below fifty degrees cannot be secured for the water in which the cans are set the milk will be as thoroughly creamed if set in pans or crocks where the temperature is sixty degrees.

Some separators will skim clean at a lower temperature than given above. The temperature for ripening cream depends very much on the condition and age of the cream and the time it will have to stand before churning. The sweeter the cream and the shorter the time to ripen it, the warmer should it be kept in order to have it ripen.

PER CENTS.—The small amount of fat in the first milk drawn and the richness of the last milk are not realized by many or they would be more particular to see that every cow is stripped clean every time milked.

H. E. VANNORMAN.

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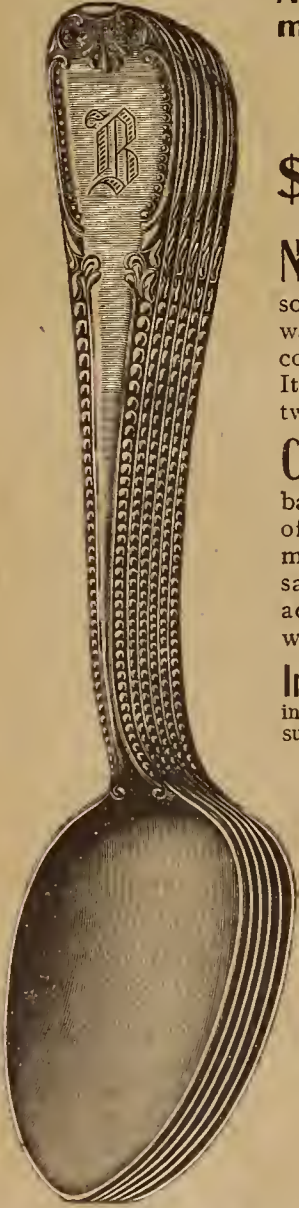
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Live Stock and Dairy

SHEEP AND ORCHARDS

SHEEP and fruit-trees make a dangerous combination, as many fruit-growers have found to their cost where sufficient precautions were not taken. But with the present availability of woven wire for protecting young trees, the orchard and the sheep may often both be gainers by such a combination.

One of the most common and serious mistakes made by many growers of orchard-fruits is the practice of cropping and removing products grown in the orchard, besides the fruit crop itself, without adding sufficient fertility to replace that removed. So long as orchards are systematically devoted to cultivated and grain crops the temptation to rob the trees of their rightful share of plant-food is too great for the average orchardist; but when permanently seeded to grass and clover, after the trees have made a good start, and then pastured by stock of light weight, as sheep, the entire fertility, except that contained in the fruit removed and wood growth of the trees, is left where it does the most good.

The fact has been conclusively proved that in the moister climates, especially with certain soils, orchards will remain healthier and yield more and better fruit when thus kept in sod and pastured than if given continual cultivation. This can be explained by the fact that where pastured by sheep, calves, poultry, etc., there is ordinarily additional feed given to the stock besides that procured by grazing, thus the fertility is constantly being added to.

Another advantage of much importance resulting from pasturing orchards is the destruction of insect enemies contained in the immature and falling fruit. Sheep are unquestionably the best stock for this scavenger work from the fact that immature fruit is more greedily eaten by them, and its effect seems to be a tonic and beneficial rather than a damage, as with hogs and calves. By reason of their weed-eating appetite and non-rooting habit they are particularly adapted for orchard pasturage.

There are thousands of hillside locations well adapted for combining the orchard and sheep industries which are now being laboriously and uneconomically tilled and used for cultivated crops.

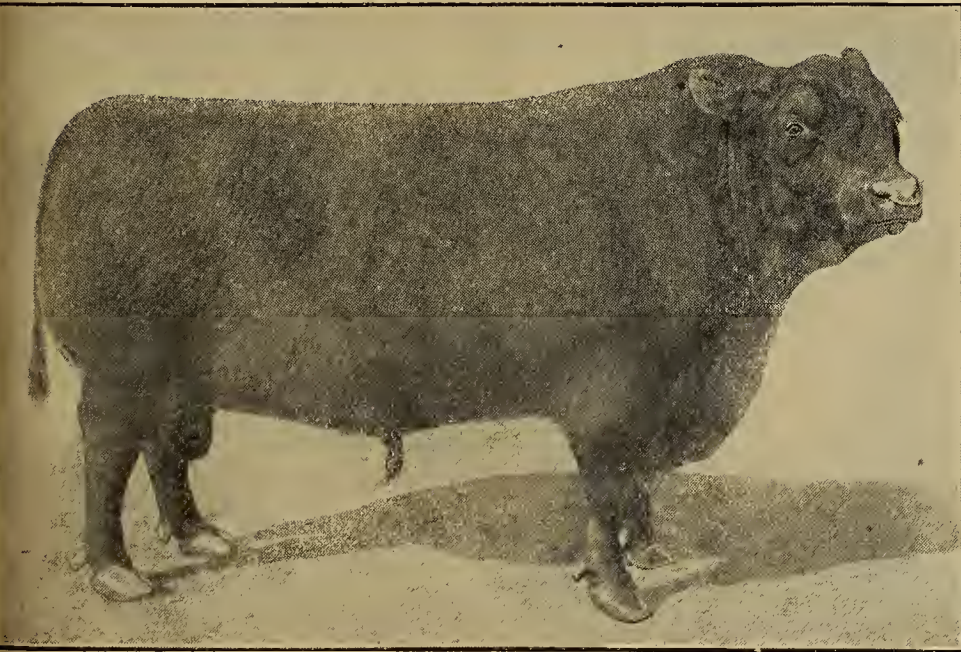
B. F. W. T.

ABERDEEN-ANGUS

Examining an Angus bull for the first time we shall notice first his black color. He is all black, the only white allowed being a little on the underline behind the navel. Some white on the udder is not objectionable, as it is thought to be usually present with the best milkers, but white is not wanted on the cod. Occasionally red calves are dropped, showing a tendency to revert to the animals of the eighteenth century, when mixed colors were comparatively common. Having observed the color, we note an entire absence of horns.

Going more into detail, note next the form. This presents a considerable variation from those previously discussed, and is very typical of the breed. While the requirements of a first-class beef-animal demand a rounded form, here we find this carried to an extreme, and the "barrel-shape" is a characteristic that the Angus claims peculiar to itself. Viewed from any direction this marked rotundity is prominent; and one notices, too, how low-set the animal is, his great style, quality, compactness and symmetry. In the feeder we find all the indications of a good beef-making machine, and in the finished animal every requirement of a market topper. We see short legs and neat, fine bone, and most particularly the wonderful smoothness which even extreme forcing is hardly able to mar.

The head is very characteristic—short, wide, clean-cut, with a muzzle whose capacious mouth and large nostrils denote excellent feeding qualities and strong powers of constitution, surmounted with a tufted poll that is sharp and higher in



BION—THE MOST FAMOUS ABERDEEN-ANGUS BULL IN THE WORLD
Purchased from Sir George Macpherson Grant, of Ballindalach, and imported by Goodwine and Fleming, of West Lebanon, Indiana

the female than in the male, and ornamented with eyes of rare beauty, and large, hairy ears, elegantly carried; the whole set to the body by a neck almost as short as that of a Hereford. The Angus head is an index of the excellence that we are to find behind it.

Note the tremendous width of chest, with legs set well outside the body, the spring of rib, and deep, heavy flesh. Observe the compactness, how closely the ribs are joined to the hind quarters. In the hind quarters we fail to find the hook bones. They are there, but so well concealed by smooth flesh that frequently the most careful handling fails to locate them. Here we find still other Angus characteristics. The tail is set a little farther forward than in the Short-horn. The buttocks are more rounded, but the quarter carries a large amount of flesh well down to the hocks.

Individuals of this breed do not attain the great weights of the Shorthorns, mature bulls rarely weighing over twenty-two hundred pounds, and cows averaging perhaps sixteen hundred pounds in show condition. But early maturity enables them to attain marketable weights in an extremely short time. Angus bulls are strongly prepotent, getting calves of great uniformity, from seventy-five to ninety per cent of which from horned cows are polled.

The milking qualities of Angus cows have been considerably neglected, and all the powers of the breed have been directed to the production of prime beef. How well this has been accomplished the markets and fat-stock shows both in England and America will witness. They stand heavy feeding admirably, and the bulls are in use all over the country in grade herds.—From Bulletin No. 34 of the United States Department of Agriculture.

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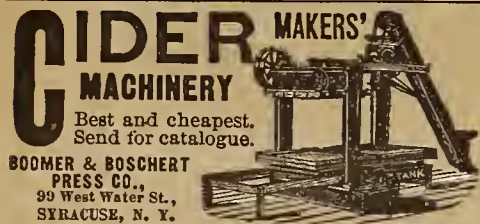
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Poultry-Raising

By P. H. JACOBS

SELECTION OF THE BEST

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BROODY HENS

If a hen desires to sit, let her have a porcelain egg and remain on the nest two weeks, feeding lightly once a day. If "broken up" from sitting she will lay but few eggs, then become broody again; but if she be allowed to remain on the nest two weeks, then driven off again, she will soon begin to lay, and continue to do so. It is better to allow a hen to hatch out a brood, however, when the conditions for raising chicks are favorable.

LAYING AND MOLTING

No hen will lay an egg every day in the year. Even those that are non-sitters will not do it at seasons when they are molting, and there is usually a rest of a day or two, if not longer, between the different layings, especially when nearing the time for the hen to sit. The time of molting may be shortened, however, by care and good feeding, giving the hens the kind of food, meat, etc., that is required to make their new coat of feathers.

QUICK RETURNS

Poultry-keeping and dairying are about the only branches of farming that afford a nearly continuous income. The staple crops yield a harvest but once a year. The profits of farming, generally speaking, come slowly, and must be patiently waited for. The young live stock, including poultry, which the farmer raises must be fed and cared for before any profit comes back, though the profit comes in due time; but fowls mature in a few months, and give quick returns.

PLEASURE WITH FOWLS

A man who once gets thoroughly into the work of breeding choice poultry is seldom willing to abandon it for some other pursuit, no matter how lucrative the new venture may be. The field it offers for the study of new breeds, the possibilities of combination and development and the broad opportunities for experiment are afforded in no other business. There is a fascination in the production of choice specimens of the pure breeds which no other pursuits usually afford.

BUILDINGS AND THE DROPPINGS

One of the principal advantages of having a separate house for poultry is in being able to save the droppings. These should not be allowed to accumulate, but should be removed at least once a week, as they are a fruitful source of disease if not removed. One will be surprised how many barrels of fertilizer can thus be saved from the droppings of a large number of well-fed fowls. Place the manure thus obtained on twenty rows of corn in the field, putting a portion in and around each hill, and the surplus corn in those twenty rows over twenty rows alongside of them not so fertilized will be more than enough to feed the twenty fowls all the year.

LICE AND FEATHER-PULLING

As lice go from one fowl to another, dusting or anointing the birds is the first step to be taken to remedy matters, and especially the chicks. Rub a little crude petroleum into the affected parts, when it will be found that the parasites will readily be destroyed. Another effective remedy is to apply one part of creosote with twenty parts of lard or vaseline. Dusting with insect-powder is also excellent. The cause of feather-eating is close confinement, idleness and overfeeding. One hen begins, and teaches the others. The remedy is to smear them on the plucked parts with one part oil of sassafras in ten parts crude petroleum, which, however, will render them unsightly.

THE PURE BREEDS

The poultry industry is more evenly distributed than any other. There is no limit to the demand for poultry, not only for that which comes from farms, but of pure breeds. Within the last twenty years there has been more attention given the breeding of poultry than during any previous fifty years, and the more the people become familiar with the value of poultry as a source of profit, the greater the demand, the larger the profits and the wider the field of operations. There is not a city, town, village or hamlet that does not possess some specimens of the feathered tribes, and the breeders have done much to increase the interest. It costs but little to begin with a small flock of pure breeds, and they multiply rapidly.

THE PROFITS FROM WASTE MATERIALS

Of all the small things the farmer possesses the hen is the most valuable. When he realizes this, and treats her accordingly, his profits will commence to increase, and continue to do so in exact proportion to the attention he bestows upon her. The farmer should make fowls pay better than any one else. Unlike other farm products, fowls can be produced, and are salable, all the year round,

and good quality properly marketed always brings paying prices. They can be kept almost altogether on the waste products of the farm, and any little expenditure that may be necessary for their welfare is amply repaid by the manure they supply for fertilizing purposes. They will also keep in check

some of the plagues of the farmer—insect pests of all varieties—much better than may be supposed, and will turn them into eggs and meat, which no one can deny are thus more remunerative. Altogether, properly managed, they will prove the most desirable product on the farm.

AVERAGE YIELDS

The difference between the yield of eggs in the most prolific cases as compared with poor layers is as three or four to one. Individual hens have been known to produce two hundred and fifty eggs a year, yet two hundred is reached so seldom as to be called a remarkable yield. An average yield that has been recorded for a flock of twelve hens is one hundred and sixty-two eggs, while the average in twelve flocks, numbering in all two hundred layers of various breeds, is one hundred and thirty-eight eggs. In the latter case there were eight breeds, some of which were old hens and others pullets, while many of the number were employed part of the time in hatching and rearing chickens. Of course, many unknown flocks may have exceeded this.

SELECTION AND HARDINESS

A healthy flock is one half the advantage. It may be said that in the breeding of poultry hardiness should be the main object. This, however, is not so in actual practice. Selection is usually made for feathering, marking, coloring and size rather than with regard to the future health of the birds. The fancier hopes to produce points in his future birds, while the poultry-keeper seems only to desire to keep up his number of birds and eggs. If one desires the best birds, whether from the fancier's or ordinary poultry-keeper's point of view, he must not only weed out the weakest and most useless of his stock, but in adding to that stock must purchase only those birds which are really fit for the purpose, health and vigor to be given the preference in selecting each individual.

DUCKLINGS AND DUCKS

Ducklings require no water except for drinking until they are three months old, and are better off without any pond at all when young. The best mothers are hens, especially the Asiatic fowls—either Cochins or Brahmas. A hen of one of these breeds will cover nine or ten eggs. An old barrel, with a board at one end to fasten the bird upon her nest, is as good as a more expensive coop. They should be let out regularly—at noon every day—for an hour's range, to get grain, green food and water. The young ducks are usually fed with fresh animal-food, bran and coarse Indian meal scalded. This, varied with chopped cabbage, turnips, liver and worms, is the staple food until they are three months old. They do much better on soft food than on grain. If ducks are furnished with a little house or pen upon the shore of any stream or pond, and a variety of grain, they will come home regularly every night. The eggs are usually laid at night or early in the morning, and very few of them need be lost. Of the four varieties—Rouen, Aylesbury, Cayuga and Pekin—the preference is given mostly to the last for early maturity, but the others also have their friends and admirers. The flesh of the duck, in the estimation of some, is one of the greatest delicacies on the farm, and they can be easily kept on a pasture. A large part of the difficulty with ducks is owing to neglect, and the reputation of the bird as a gross feeder is due to irregular supplies of food. If grain or varied food is kept within reach they devour no more than other fowls that mature as rapidly. If in suitable quarters and well fed they get most of their growth in four months, and can be marketed in the watering-places from May to August at high prices.

GOSLINGS.—G. R., Salem, Va., asks how to feed goslings in summer. If they have a free range they will require no assistance, as they can supply themselves.

YOUNG TURKEYS.—R. E. L., Pomeroy, Pa., has some young turkeys, hatched rather early, which roost in a tree, several being lame. The lameness is caused by the young turkeys alighting on their feet every morning, the roosting-place being too high for them.

FOWLS DYING.—Mrs. B. D., Seadrift, Texas, states that her chickens droop, have purple combs, and die off one by one. It is probable that they are very fat, and it would be an advantage to remove the males. In a warm climate such difficulty frequently occurs even when fowls are on a range. It would not be out of place to also examine for the large body-lice.

DISTINGUISHING CHICKS.—Mrs. G. W. L., St. Paris, Ohio, asks to be instructed in some method by which she can distinguish her chicks from those of a neighbor. She has marked them with paint, but this has rubbed off. An excellent mode is to procure a chicken "marker," which punches holes in the webs of the feet, and which can be used by any one. They are for sale at all poultry-supply houses.

GAPES.—Miss A. C., Hamill, Pa., desires to know how young chicks can be prevented from having the gapes. Gapes are due to filth, and occur most on locations upon which fowls have been kept for years. As a preventive keep the chicks on ground not previously occupied by poultry, and feed them on clean boards. Lime freely dusted on the ground is said to prevent or destroy the conditions favorable to gapes.

A FIVE-HUNDRED-DOLLAR NEST-EGG

Those of our folks who are interested in poultry would surely be satisfied with a nest-egg of this value, all in cash. And this is only one of 207 cash prizes, aggregating \$1,500.00. See page 19 for full particulars.

The Grange

By MRS. MARY E. LEE

We suffer more ills from the indifference, ignorance and negligence of the people than from the overt sins of our legislators.

The best evidence that the grange pays educationally, socially, financially, is that in the communities where it is the strongest is found the highest social life.

Strange how some people will prate of international amity and peace, and yet not be able to engender enough brotherly love to organize and maintain a good grange.

During the winter John Smith accused Congress, the legislature, courts and all governmental employees of incapacity, cowardice and the base surrender of principle to self-interest, and at the spring elections used his vote and influence for road supervisor and school director to gratify a spite or further his own private interests. A very noble, high-minded, conscientious, patriotic and consistent citizen is John Smith.

MEN AND DOGS

When I see the face, in person or in picture, of a weak, shallow, inefficient man, who secures a good fat stipend through the suffrage of the people, directly or indirectly, by appointment to a clerkship by one who owes his high place to the people; and when I see men and women point him out, with bated breath, saying, "That is Mr. So-and-So, clerk of such and such a place," and instinctively draw aside to let the great man go by, or hold open the door with deferential obsequiousness for the minister of the law to pass out, I am forcibly reminded of the old Athenian philosopher's famous "bon mot," "The more I see of men, the more I think of dogs."

BROAD POLICY

The recent decision on the Illinois trust laws, in which they were found invalid because of the clause exempting farmers and stock-raisers from the restrictions applied to other industries, brings home a truth that we are sometimes apt to forget. An act must be just and righteous, else it contains within itself the germ that will eventually destroy it. Farmers cannot afford to not think they want to aid or abet in any way legislation that will give them special privileges. Inconsistent indeed would be their demands for just and equitable laws if in the same breath they asked for special privilege. Fallacious is the reasoning that because another industry is favored, ours must be. Favoritism is so repugnant to our republican form of government that the well-informed class—which is constantly being augmented—will not sanction any pretensions.

COUNT THAT DAY LOST

Wherein you have not contributed in some way to the sum-total of human happiness,
Found some new causes for happiness, and
Learned an easier and better way of performing one of your myriad of duties.

By bringing to your daily life such thought, each recurring day will bring growth and advancement. Narrowness, bigotry, selfishness and the grind of drudgery will give place to sweetness, beauty and noble endeavor. Stupid, blundering toil enervates and destroys. Labor illumined with thought invigorates and vivifies.

GRANGE GUBERNATORIAL CANDIDATES

Hon. N. J. Bachelder, Lecturer of the National Grange, and Master of the New Hampshire State Grange, is an acknowledged candidate for Governor of his state. All Patrons know the excellent service he is rendering the Grange in his capacity as Lecturer. That he would serve all interests with impartial justice were he governor, those who best know him bear abundant testimony. Brother Bachelder is an honest, conscientious, able man.

From Michigan comes the rumor of the candidacy of Hon. Geo. B. Horton for Governor. Every one knows the splendid service he has rendered the farmers of his state as Master of the Michigan State Grange. The same honor, industry, zeal and sagacity that has made him a phenomenal organizer, and won for him the highest office in his grange—that of High Priest of Demeter—will make him a trusted and efficient governor of his state.

AN ATTRACTIVE INTERIOR

The accompanying illustration is of a country school in Winnebago County, Illinois. The room was not unlike others of its kind found all over our land—dreary, bare, dirty. The enthusiasm and energy of Superintendent O. J. Kern communicated itself to the teacher. The room was cleaned (and kept clean) and papered. The district was interested in the subject of furnishing better and



IMPROVED SCHOOL-ROOM

more artistic surroundings for the children. A social was held, thus raising money with which to buy a bookcase, books, pictures and statuary. The children appear proud and happy in their dainty surroundings. There is nothing that so plainly bears the stamp of the artistic temperament of a community as beautiful school-rooms and school-grounds.

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made of, take it from an

Elgin Watch

the timekeeper of a lifetime—the world's
standard pocket timepiece. Sold every-
where; fully guaranteed. Booklet free.

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A Handsome Silver-Plated Butter-Knife Or Fine Silver-Plated Sugar-Shell

No. 65

And Farm and Fireside for the
Remainder of This Year for Only **40c.**

And Any One Accepting This Offer is also
Entitled to a Free Count in Our Wonderful
Dot Contest, Described on Page 19, Offering a

**GRAND PRIZE OF
\$500.00 CASH**

And 206 Other Cash Rewards, Aggregating
\$1,500.00.

The base of this ware is solid nickel-silver
metal, which is the best white metal known
for the base of silver-plated ware, as it is so
hard and so white that it will never change
color and will wear a lifetime. The pieces
are plated with the full **standard** amount of
pure coin-silver, and are of regular size.

Will Stand Any Test To test this silver-
ware use acids or
a file. If not found to be plated with the full **stan-**
dard amount of pure coin-silver and the base solid
white metal, and exactly as described in every
other particular, we will refund your money and
make you a present of the subscription. We are
unable to adequately describe their beauty and
durability. You must test them for yourself.

Initial Letter Each piece is en-
graved free of
charge with an initial letter in Old Eng-
lish. Only one letter on a piece. Always
state initial desired.

Pattern We have the pieces in two
beautiful patterns, and we
also reserve the privilege of substituting
one pattern for the other if the supply in
any particular initial is exhausted. We
can thus fill all orders the same day they
reach us.

EXTRAORDINARY OFFER

We will send both pieces, the Butter-
Knife and the Sugar-Shell, and Farm and
Fireside the remainder of this year for
only 50 cents, and also give you a Free
Count in the Dot Contest.

ACTUAL SIZE

ACTUAL SIZE

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The blades are of the very best cutlery-steel, tempered
by experts, ground to a keen edge and then highly polished.
The knife is brass-lined and hand-forged. Buffalo-horn handle,
and German-silver bolster and shield. Satisfaction guaranteed.

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the subscribers can accept any of the offers in
this paper including the FARM AND FIRESIDE.

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FREE TRIAL PACKAGE sent by mail.

"Oh, What Rest and Comfort!" **MOTHER GRAY'S SWEET POWDERS**, the best medicine for Feverish, Sickly Children. Sold by Druggists everywhere. Trial Package **FREE**. Address, **ALLEN S. OLINSTEAD, Le Roy, N. Y.** [Mention this paper.]

THROUGH GEYSERLAND**Yellowstone Park Tour Arranged by Pennsylvania Lines**

The Pennsylvania Lines will run a vestibuled Pullman train from Indianapolis to the Yellowstone National Park, August 14th. The tour will be a model one, and first-class and thoroughly enjoyable and comfortable in every particular. A stop of an entire day will be made at St. Paul and Minneapolis, and shorter stops at other points en route. Arriving at the Park, arrangements have been made for both hotel and camping tours of "Wonderland."

An illustrated itinerary of the tour will be mailed upon application to W. W. Richardson, district passenger agent Pennsylvania Lines, Indianapolis, Ind.

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How to reduce it
 Mr. Hugo Horn, 344 E. 65th St., New York City, writes:
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 You can save someone's eyesight by writing Dr. Coffee for his famous free eye book. Contains 80 pages; colored photographs of eyes from life. Aneye history. Contains eye tests; worth \$5 but it is free. Tells also how to cure cataracts, scum, sore eyes, falling sight—all eye troubles with painless medicines, at small expense, at home. A. J. Palmer, Melrose, Iowa, was cured of blindness in 3 months. Hope for everyone. Advice free.

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If you have Rheumatism, Gout, Lumbago, Sciatica, etc., when doctors fail to cure you, you write to me, and I will send you, free of cost, a package of the most wonderful remedy which cured me and hundreds of others, among them cases of 30 years' standing. It is a simple remedy, and will cure you without detention from work. Address **JOHN A. SMITH, 4195 Germania Building, Milwaukee, Wis.**

BEDBUGS DOOMED
 Of all the worries of the housekeeper the bedbug is the worst. All will be thankful a remedy which absolutely rids a house of all bugs has been found. Mrs. Bertha Fremont, 435 Fourth, Des Moines, Iowa, is the discoverer. She will send a large sample, enough for three beds, for 15c., actual cost of postage, packing, etc. Her regular size is 50c. Every reader ought to send at once.

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weekly by representing us in her locality and as the position is pleasant and profitable the year round we will gladly send particulars free to all. Even your spare time is valuable. This is no deception, and if you really want to make money address **WOMAN'S MUTUAL BENEFIT CO., Box 19, JOLIET, ILL.**

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At a first-class school. — Situations guaranteed. Students also taught by mail. **BOOK FREE.** Oberlin School of Telegraphy, Oberlin, Ohio

CANCER and Tumors cured by scientific methods. Long experience. No knife used. Book free. Address **Dr. C. Weber, 121 W. 5th St., Cincinnati, O.**

BED-WETTING CURED. Sample FREE.

Dr. F. E. May, Bloomington, Ill.
 If afflicted with weak eyes, use **Thompson's Eye Water**

Around the Fireside**THE IVY GREEN**

Oh, dainty plant is the ivy green,
 That creepeth o'er ruins old!
 Of right choice food are his meals, I ween,
 In his cell so lone and cold.
 The walls must be crumbled, the stones decayed,
 To pleasure his dainty whim;
 And the moldering dust that years have made
 Is a merry meal for him.
 Creeping where no life is seen,
 A rare old plant is the ivy green.

Fast he stealeth on, though he wears no wings,
 And a stanch old heart has he!
 How closely he twineth, how tight he clings
 To his friend, the huge oak-tree!
 And slyly he traileth along the ground,
 And his leaves he gently waves,
 And he joyously twines and hugs around
 The rich mold of dead men's graves.
 Creeping where grim death has been,
 A rare old plant is the ivy green.

Whole ages have fled, and their works decayed,
 And nations have scattered been;
 But the stout old ivy shall never fade
 From its hale and hearty green,
 The brave old plant in its lonely days
 Shall fatten upon the past;
 For the stateliest building man can raise
 Is the ivy's food at last.
 Creeping on where Time has been,
 A rare old plant is the ivy green.

—Charles Dickens.

TO MAKE CUT-FLOWERS LASTING

As a rule cut-flowers will last longer if allowed to stand a short time in water before using. This simply applies, of course, where they are to be worn or carried as a bouquet, or used in decorations where they may not be placed in water.—Meehans' Monthly.

A KINGDOM FOR A HORSESHOE

King Edward owes his crown to a horse's shoe. The act of settlement, by which, in 1701, Parliament elected the House of Hanover to the British throne, passed the Commons by only one majority. This deciding vote was given by Sir Arthur Owen, M.P., for Pembrokehire, third of his title, who rode post-haste from Wales for the purpose. He had relays of fresh horses all along the route, but arrived, dusty and travel-worn, at Westminster barely in time to the very minute. Had one of his horses gone lame or cast a shoe he would have been too late.—The Hall-Table.

MR. CARNEGIE'S PHILOSOPHY

The millionaires are the bees of the hive, not the drones. Capital, business ability and labor must be united in any enterprise.

Every employer of labor is anxiously studying the men around him.

College graduates will usually be found under-salaried, trusting subordinates.

The trouble is men are not paid at any time the compensation proper to that time.

I attribute most of my success in life to the fact that trouble runs off my back like water from a duck.

It will be a great mistake for the community to shoot the millionaires, for they are the bees that make the most honey, and contribute most to the hive after they have gorged themselves full.

Men who in old age strive only to increase their already great hoards are usually the slaves of the habit of hoarding formed in their youth. At first they own the money; later in life the money owns them.

It is not from the sons of the millionaire or the noble that the world receives its teachers, its martyrs, its inventors, its statesmen, its poets, or even its men of affairs. It is from the cottage of the poor that all these spring.—From "The Empire of Business."

THE CRYSTAL SPRINGS OF FLORIDA

Nearly all the streams of Florida originate in large springs of remarkably clear water. Some of these springs form lakes of considerable dimensions, while others flow off directly in bold streams. The water is so clear that the most minute objects even on the bottom are readily distinguished, and large streams of crystal water can be seen gushing up through the white limestone-beds beneath. At points remote from these inlets the bottom is covered with the long green moss that grows only in pure spring-water; beautiful fish of many varieties are also plainly visible. The outlets of the springs are generally deep, narrow and rapid streams. Of so much importance to Florida are these river-producing springs that the United States Geological Survey, in its investigation of the country's water resources, has made a series of measurements of their discharge. One of the characteristic springs, which was measured by hydrographer B. M. Hall, of the Geological Survey, is Silver Spring, near Ocala, in Marion County. It is the head of Oclawaha River, and is also the head of navigation, as steamboats come up the river into the spring, and have a regular landing-wharf there. The river flowing out of this spring was found to be sixty feet wide. It had a mean depth of eleven feet, a mean velocity of one and one fourth

feet a second, and a discharge of eight hundred and twenty-five cubic feet a second. The spring basin is about thirty-five feet deep, and the temperature late in December was seventy-two degrees Fahrenheit. Though the water has a slight limestone taste, it appears to have no other mineral constituents, and is excellent for drinking.

ROBINSON CRUSOE'S ISLAND

It ought to require little divining to show the absurdity of the statement, which periodically goes the rounds of certain newspapers, that Juan Fernandez is Robinson Crusoe's island. A glance at the original title-page of Defoe's famous book ought to decide that question to the satisfaction of any but one who is determined not to see, while the text of the work itself is even more explicit in showing that Robinson Crusoe's island was off the east, and not the west, coast of South America. The title-page reads as follows:

"The LIFE and STRANGE SURPRISING ADVENTURES of ROBINSON CRUSOE of YORK, MARINER; Who lived Eight and Twenty Years, all alone, in an uninhabited Island on the Coast of AMERICA, near the Mouth of the Great River of OROONOQUE; Having been cast on Shore by Shipwreck, wherein all the Men perished but himself. WITH An Account how he was at last as strangely deliver'd by PYRATES. Written by Himself. LONDON: Printed for W. Taylor at the Ship in Pater Noster Row. MDCCLXIX."

If this plain statement that the island whereon Crusoe lived was at the mouth of the Orinoco—that is, off the coast of Venezuela—be not sufficient, let the doubter turn to Crusoe's narrative, and he will find that the ship after the hurricane swept it from its course was "upon the coast of Guiana, or the north part of Brazil, beyond the river Amazons, toward that of the river Oroonoke." They therefore resolve to "stand away for Barbadoes," which lies nearly north of the mouth of the Orinoco.

Wherever the immortal author of the children's classic obtained his material, his readers may be assured that the island where Robinson and Friday lived lay in or near the Caribbean Sea, and had scarcely any nearer connection with Juan Fernandez than it had with the mountains of the moon. The myth, like Tennyson's brook, will probably flow on and on forever, gathering vigor with every new generation of newspaper writers, and probably will never be dammed.—New York Times.

ABOUT TRUST COMPANIES

The usefulness and popularity of trust companies are proved by their almost uniform success. General confidence in the continuance and growth of this popularity is shown by the fact that at the present time many new trust companies are being organized in most of our large cities, and indeed in many of the smaller towns.

The banks do not appear to have been injured by the enormous business of such companies, for the bank deposits show a great increase during the last few years, and the number of banks has been so enlarged that excellent banking facilities are provided in nearly all parts of the country.

A trust company has no better facilities for lending money than has a bank of deposit and discount, but it pays interest upon nearly all of its deposit accounts. This it could not afford to do if its profits depended only upon loans. It may act as fiscal agent for any state, municipality or corporation, and may transfer or register bonds or certificates of stock. It may serve as trustee under any mortgage or bond issued by a corporation, or as guardian, receiver, executor or committee. It executes any trust conferred by a person or corporation, and may hold any real or personal property subject to such trust. It may care for your securities and collect your rents while you live, and after your death act as your executor, as the administrator of your estate or as guardian for the estate of your children. It is desirable as a trustee because it does not die, and is always ready for service.

The tendency at present to organize corporations for carrying on all kinds of business opens a wide field for the operations of such institutions. A trust company attends to the consolidation of corporations, acts as trustee under mortgages securing bond issues, transfers and registers bonds and stocks, pays the coupons, cares for the sinking-fund (if any), and forecloses the mortgage executed to secure the bonds in case of default.

Trust companies do not generally desire active or business accounts. These are solicited by banks, which grant to their customers lines of discount, collect drafts and checks, certify checks, etc. A trustee of funds awaiting investment deposits in a trust company at the best rate of interest to be obtained, while a business firm deposits in a bank, where it has the benefit of discounts and collections. The business of the trust companies shows such enormous growth not because they have divided the banking business with the banks, but because they are so useful to corporations, and also for the reason that the public sees the advantage of selecting a trust company instead of an individual as a trustee, and is becoming accustomed to this method. The banks have never done, or sought to do, the special kinds of business for the transaction of which the trust companies exist.

Any one who can add figures can count the dots in the novel contest described on page 19. Somebody is going to get the grand prize of \$500.00 cash, and there are 206 other cash rewards. You have an equal opportunity with others. Don't delay. Count now.

The Housewife

THE ART OF BEING WELL DRESSED

It is not the frequent buying of expensive clothing so much as the care of the clothing one has that makes the well-dressed woman. The majority of shabby people one meets owe their shabbiness to the lack of care they have given their clothing, and to its general appearance of untidiness, rather than to the poor quality. Rusty shoes, with seams ripped and buttons off; gloves out at the fingers;



dress spotted, with worn binding; buttons off the coat, and hat with trimmings dusty and awry—these are things that can be remedied by the proverbial “stitch in time,” together with a little brushing and cleaning.

No woman of refinement will ever wear clothing which is not absolutely neat, and this it may be so long as it can be worn. Old shoes may have the rips repaired, the buttons replaced and a little blacking added, and gloves will be quite respectable in appearance if neatly mended. Spots should be removed from dresses as fast as they appear, and when they begin to wear at the bottom a new binding will freshen and give them a new lease on respectability.

Dress-waists should never be hung in a closet when taken off, but be hung wrong side out where they will air for some hours. Skirt and waist should be carefully brushed before putting away. It is a good plan to hang dresses, coats, etc., on a line outdoors occasionally, to let the sun's rays and wind thoroughly cleanse them from any odor they may have acquired.

MAIDA McL.

THE PICKLING-SEASON

Neither canned fruit nor pickles of any kind can keep well in a damp cellar. It is a good plan to absorb this moisture and purify the air by placing a gallon crock half full of chlorid of lime in each corner. Fresh lime should be put in every five or six weeks.

Great caution should be exercised, when making pickles, catch-ups, and the like, that nothing but glass or earthenware vessels be allowed to come in contact with the preparations. Salt, vegetables, juices and vinegar rapidly corrode copper, lead or pewter vessels, and in time the pickles or catchup will be rendered poisonous if allowed to remain in such vessels.

Vinegar can be made from tomatoes. Press the juice from very ripe tomatoes; add one gill of molasses to one quart of juice, set in a warm place for half a day, and you will have a very good quality of vinegar.

You can readily determine whether vinegar is of vegetable origin or made of acids. Fill a glass bottle that is perfectly clear, then hold it to the light and look at it carefully. If it is of vegetable origin you will see signs of animal life in the form of little wrigglers.

CURRENT CATCHUP.—Put into a preserving-kettle four pounds of currants, two and one half pounds of sugar, one pint of vinegar, one tablespoonful each of mace, cinnamon and black pepper, and one tablespoonful of salt. Boil all together until the fruit is thoroughly cooked, then seal.

Tomato catchup can be made without heat, but care must

be exercised in following the directions. Take one half peck of whole, ripe tomatoes, one cupful of chopped celery, three onions, one pound of brown sugar, one half cupful of salt, one half cupful of mustard, one quart of cider vinegar, two red peppers, an ounce of ground cinnamon and one tablespoonful of mace. The onions and peppers must be chopped fine, then added to the tomatoes after they have been drained of most of their juice. All the other ingredients should then be thoroughly mixed with these, placed in glass jars, and sealed tight. The jars must be wrapped with brown paper, and put in a dark, cool place, where the catchup will keep nicely.

MUSHROOM CATCHUP.—After the mushrooms have been obtained and cleaned, lay a layer in an earthen jar, and cover with a very thin layer of salt; put in another layer of mushrooms, then another layer of salt, and so continue until all the mushrooms have been used. When they have lain in the salt for five or six hours break into small pieces, and set in the cellar for thirty-six hours, stirring twice a day. When the time has elapsed, strain off the juice, and for every quart add one half ounce of ginger, the same of allspice, one half teaspoonful of powdered mace and one teaspoonful of cayenne pepper. Boil briskly for four hours, being careful not to let it burn, then pour over the mushrooms, which have been cooking slowly during this time. Put in the cellar over night, heat all up again in the morning, and put in jars, sealing immediately. Wrap in dark-colored papers, and put in a dark, cool place as soon as the jars are cold.

ELLA BARTLETT SIMMONS.

MARMALADES

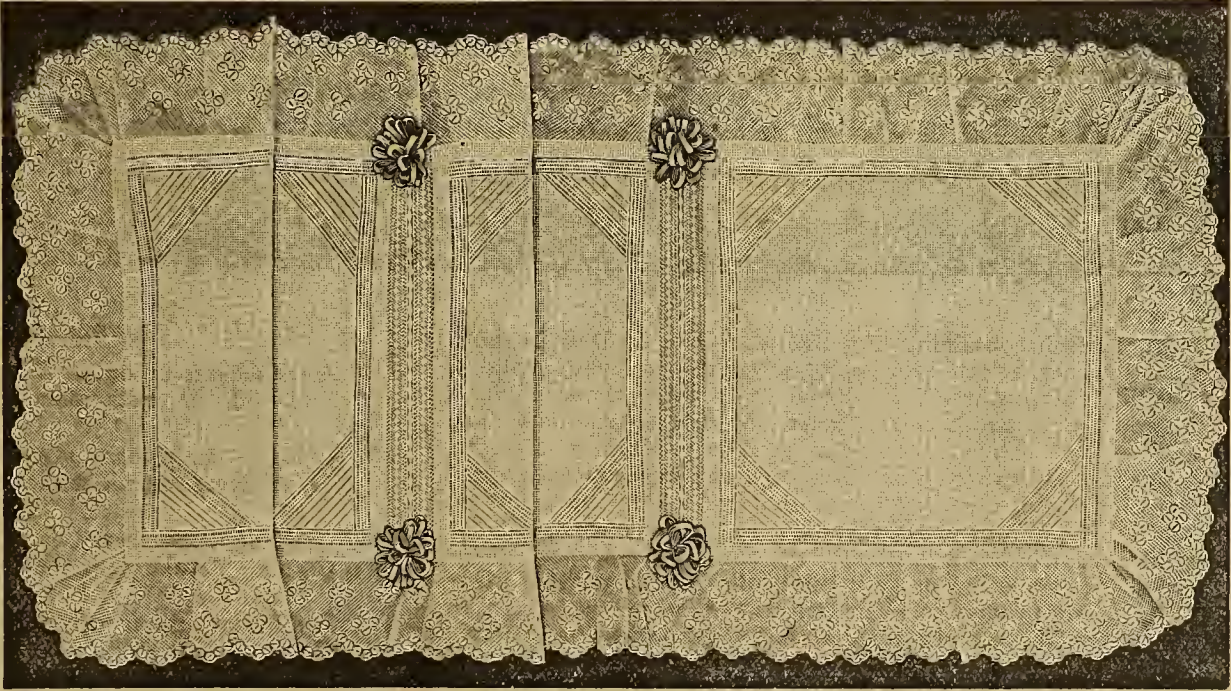
APPLE MARMALADE.—Wash, peel and core eight pounds of tart apples, and put them in a preserving-kettle with a little more than one pint of water; add the rind of four lemons, and boil to a pulp, stirring almost constantly, to prevent burning; then add the juice of the lemons and four and one half pounds of sugar, and boil forty-five minutes longer.

PLUM MARMALADE.—After the plums are washed, cut them in slashes nearly to the stone, then put in a kettle and place over a moderate fire; stir to prevent burning. The stones will soon be separated from the pulp, and can then be skinned off. When the plums are tender rub through a sieve. Any fruit that will not cook very fine of itself ought to be rubbed through a sieve if nice marmalade is desired. Add three fourths of a pound of sugar to one full pound of the plum-pulp. Boil together for fifteen minutes, then seal in glasses or jars.

E. B. S.

BUREAU-SCARF

For the woman who cannot do fancy work we give the accompanying illustration as an idea for a pretty bureau-



scarf. It is made of three handkerchiefs joined with lace beading insertion, through which ribbon can be drawn. A wider lace finishes the edge. Lay it over colored silesia.

CORSET-COVERS

These are made of China silk in pink and blue, trimmed with lace insertion and lace and ribbons to match.

WOULDN'T IT COME HANDY?

We mean that grand prize of Five Hundred Dollars Cash offered in the Dot Contest on page 19. And this is only one of 207 cash prizes that will be given! Count the dots to-day.

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25-Years' Binding Guarantee! All explained in our FREE MUSIC CATALOGUE. We sell pianos from \$89.00 to \$165.00, the equal of instruments sold by dealers and agents at DOUBLE our prices. High Grand Violins, Guitars and Mandolins at \$2.45 and upwards. For our beautifully illustrated, big complete Music Catalogue, lowest prices, free trial and pay after received offer, cut this ad out and mail to SEARS, ROEBUCK & CO., Chicago, Ill.

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1902 Models, \$9 to \$15

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500 Second-hand Wheels all makes and models, good as new, \$3 to \$8. Great Factory Clearing Sale at half factory cost.

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FARM AND FIRESIDE, Springfield, Ohio

PREPARED FELT ROOFING.

We bought at Receiver's Sale 20,000 rolls “Eagle” Brand Roofing. Made of two sheets saturated felt, between sheets waterproof cement making a solid, flexible sheet, it can be put on without removing the old roof. Can be applied without previous experience, requiring no special tools. Each roll contains 108 square feet. Price complete with cement for two coats, caps and nails to lay, per roll, \$1.05. Also a few rolls, 3 ply, per roll, \$1.25. Ask for Catalogue No. 84.

CHICAGO HOUSE WRECKING CO., W. 35th and Iron Sts., Chicago

WHEEL CHAIRS AND OTHER INVALIDS' GOODS

RECLINING CHAIRS

Comfort for All. Catalogue Free.

STEVENS CHAIR CO. 104 Sixth St., Pittsburg, Pa.

Banner Lye

The best help in cleaning household and farm utensils. Makes pure soap without boiling.

Farmers' Sons Wanted—with knowledge of farm stock and fair education to work in an office; \$80 a month with advancement; steady employment; must be honest and reliable. Branch offices of the association are being established in each state. Apply at once, giving full particulars. The Veterinary Science Ass'n, London, Canada.

SPECTACLES at wholesale. Send for catalogue. Agents wanted. Coulter Optical Co., Chicago, Ill.

If afflicted with weak eyes, use Thompson's Eye Water

IN SHELBY COUNTY, Ohio, is the largest chicken and egg plant in the world. It is further distinguished from all other poultry-houses in five ways—first, it produces for the market only, caring nothing for fancy breeds or other side-lines; second, it is operated on an absolute system; third, it never loses a chicken by disease; fourth, it produces unfertile eggs; fifth, and most important, it is based on "kindness."

The daily output is two hundred dozen unfertile eggs, which sell at an advance of fifteen cents over the market price, never less than thirty cents, and three hundred and thirty one-and-one-half-pound broilers or one-half-pound "squabs," both unequaled for tenderness, quality and flavor. There is no direct competition, business is on a strictly cash-in-advance basis, the demand is constant the year round, and the system is perfect.

How was it all done? The owner must be an old hand, wise in poultry lore. On the contrary, his venture is only a few years old, and he says that he doesn't know anything about the chicken business—that the only thing he goes by is plain, every-day common sense. The inference is that he must have a good deal of it.

The plant divides into two separate industries—one producing chickens, the other unfertile eggs. Let us follow the former from the beginning. In a building by itself are nine hundred Plymouth Rock hens in sixty pens, fifteen to a pen, one rooster to fifteen hens. They are selected not according to points, but for health and strength only. To avoid favoritism the roosters are changed once a week. The hens lay all the year through, this being accomplished by watching their diet. The body-heat of a hen must be one hundred and three degrees before she can hatch or wants to sit. This high temperature is caused by fever, and if the fever is prevented the hen will continue to lay, and not get "broody." At the first sign of it (it does not happen often) the hen is changed from corn to a less heating diet in smaller quantities, and at night is kept in the damp yard that opens off every pen. This "cools her off," and she begins laying once more. So when the feed-cart goes down the long aisle between the two rows of pens it returns laden with fresh eggs.

These eggs are taken to a room in the basement of the main building, which contains thirty thirty-day incubators of three-hundred-egg capacity each. Two incubators are started one day, one the next, so that every day would average four hundred and fifty chicks if all hatched. Very few fail. At the end of seven days a lamp-test is made, and unpromising eggs taken out and sold to local bakers. Seven days later another test is taken. After hatching, the chicks are left in the machines one day, for their systems to dry out.

Chicken and Egg Farm

By A. S. HOFFMAN

On the thirty-first day of their lives the chicks are transferred from the "nursery" to the "horseshoe," a similar but far larger building under the same roof, eight hundred and forty feet in length, the end of it being right across the driveway from the starting-point. The pens are sixty in number, larger, and each opens into an outdoor yard. On the theory that a chick when cold will crouch on the ground, expecting heat from above, "mothers" are provided. In each pen is a large metal disk, which reflects down the heat from two natural-gas burners under it, the disks becoming higher from the ground in every pen. This keeps the temperature at about sixty-five degrees, fifteen degrees lower than in the "nursery." Supplementary heat can be furnished from steam-pipes, and ventilation is afforded by cold-air ducts every thirty-seven feet. The population of the "horseshoe" averages twenty-one thousand, that of the "nursery" nine thousand, making a total of thirty thousand chicks of all ages.

Until they are half way around the "horseshoe"—sixty days old—the chicks are never allowed to roost, so that they rest on the ground and gain in shape and fullness of breast. When sixty days old they weigh one half pound, and many are then sold to fashionable hotels as "squabs," never bringing less than five dollars a dozen. At Pen No. 70 cement floors begin, and the diet, hitherto designed to give only health and strength, is changed from ground corn to mash in order to produce weight and bulk. At the end they are ninety days old and average one and one half pounds. There has been no disease; they are tender, plump, delicate, the finest broilers on the market, and worth from five dollars to six dollars and more a dozen.

They move on to the killing-room seventy-five in a coop. A man strings them up by the feet, runs a lance into a blood-vessel in the roof of the mouth, which causes copious bleeding, and then kills them by piercing the brain. The latter is an ingenious device, for it relaxes the whole system, so that the feathers come easily from the exquisitely tender skin without breaking it. After being "roughed" the bird is "pinned" of its smaller feathers; head, feet and insides are left, and the whole remains through the day in running water, in order to remove the animal heat "by degrees." After spending the night in ice-water the broiler is ready for shipment.

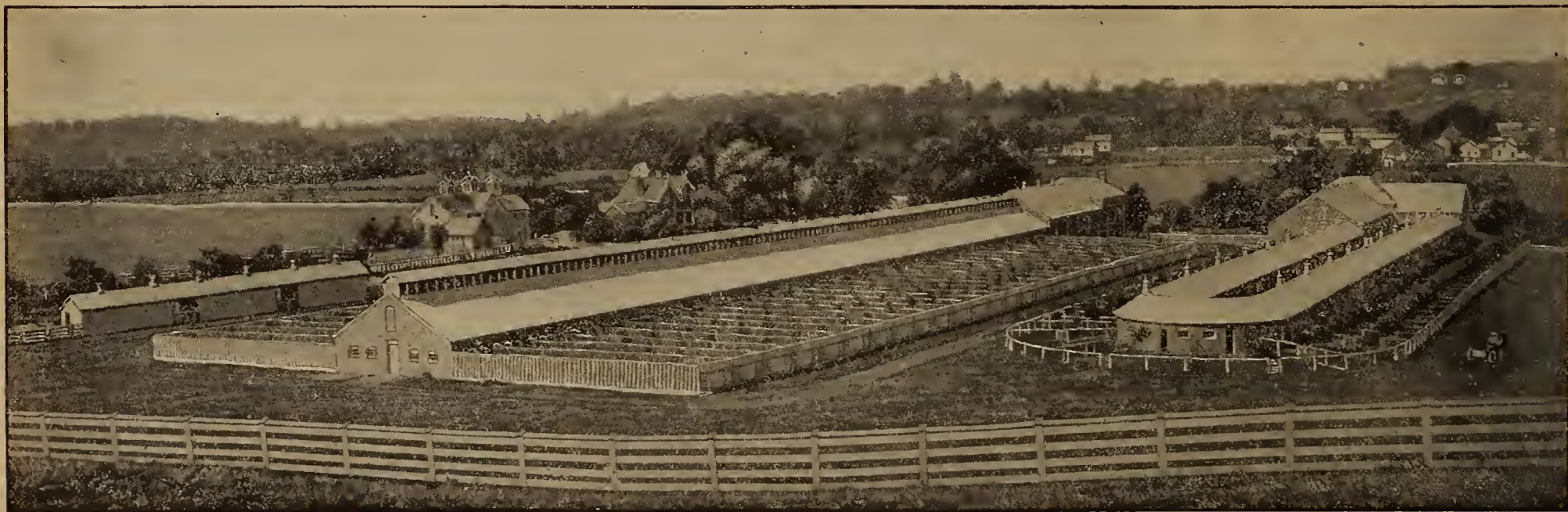
The "egg-house" is a separate building, five hundred and thirty-seven feet long, with sixty pens,

clover, then oats and turnips as stated, and lastly two inches of middlings. By the time this has cooled the moisture has been taken up by the dry clover, and the whole is thoroughly mixed. An important point is that the clover must be sweated and the oats steamed, not boiled, so that none of the ingredients are

steeped out of them. Roughly speaking the food-plan is that the corn and oats make the meat of the egg, and give strength to the chick; the bone is for the egg-film; the bran and clover for the lime of the shells, and the turnip and potato for a relish. By watching results and studying experiments the correct proportion of each element is learned for any one case. One may know just what materials are needed for a pie, but it does not follow that one can make a good pie just from that knowledge. The total feed-bill amounts to only twelve hundred dollars a year, from which the plant raises over one hundred thousand broilers and produces eight hundred and seventy-six thousand unfertile eggs.

The great system is carried out in every detail. There is an engine-room and heating apparatus for steam and hot water, a laundry for the "nursery" floor-cloths, a corn-grinder, mash-press, mash-boiler, a shaver for potatoes and turnips, a chopper for clover, a provision-cellar, and also, by the way, a great loft, in which the proprietor intends soon to place sixty thousand pigeons to produce one thousand squabs a day.

But the one thing more than any other to which the proprietor attributes his phenomenal success is the common sense of "kindness." He is a practical philosopher. He noted that when a man goes to his dinner contented and free from worry he enjoys the meal, digests it easily, and profits by it. If he is worried, tired or ill at ease when he eats he neither enjoys, digests nor profits. This common-sense proprietor buys many wild Texas steers in Chicago every spring, and ships them to his quiet, blue-grass Ohio farm. They eat nothing except grass, but day by day his men work at taming them. Gradually the steers lose their fright and wildness, become contented and happy, and in the fall are sold back to Chicago at a heavy profit. By grass and kindness he has added from one to two hundred pounds to each head. He has tried the same plan successfully with sheep. He makes it the foundation of his poultry and egg plant. During the three months of their lives his chicks never know a minute of fright or rough usage. They find only gentleness, quiet and content, and therefore they thrive. No sudden movements or noises are permitted. If an employee approaches a pen without first calling "Chick, chick," he loses his place. Upon such "little" things as these is built the largest poultry and egg plant in the world.



A year-around average of three hundred and thirty chicks goes up every day in a little elevator to the "nursery." Here is a horseshoe of thirty pens, gradually increasing in size. A chicken never spends two days in the same pen, but throughout the entire system moves up one pen every day, the entire change requiring only fifteen minutes. Thus the system is on a most exact arithmetical foundation.

During the first thirty-six hours in the "nursery" the chicks receive no food. The floors of the first seven pens are covered with removable cloth, and there is no sand that the chicks can pick up, and so injure their tender organs. The proprietor explained that a chicken "has no sense," and not having food, would pick up the sand. So until they have been half a day in Pen No. 2 they do nothing but run around and dry out some more. The first food is a bare pinch of finely ground corn placed on a board. The chicks learn to go to the board for food, and it is always found there, and nowhere else. Thus no food is wasted, and the amount used is known exactly. At Pen No. 8 the cloth is replaced by sand on the boards. Water is furnished from a self-feeding can with a narrow trough around it. Gentle heat comes from hot-water pipes a foot or so from the floor over one end of the pen, the distance from the floor being increased every ten pens. The ground-corn diet is increased gradually from pen to pen, until when they reach Pen No. 30 a handful is given three times a day for the entire brood.

each containing fifty Brown, White or Buff Leghorn hens, selected for health, strength and laying qualities, not for breeding. From these three thousand hens come two hundred dozen unfertile eggs a day. The production of unfertile eggs is peculiar to this one plant, where was first made the experiment of producing eggs from hens that had never been exposed to a rooster. Of course, an unfertile egg will not hatch, but it is far superior for market purposes, having a delicious and delicate flavor and unusual keeping properties. The yolk is a light yellow. Here, as in the "hatchery," the most exact system is in force, and the same methods of preventing brooding are followed. The market is with dealers who cater to the fashionable trade of the larger cities.

Of course, the food-problem is extremely important. Here, as everywhere, so absolute a system prevails that even the size of an egg can be determined by feeding lime (shell) elements at a certain time. Finely cracked corn, mash and green-bone dust are used in both lines of the business. In the yards is scattered charcoal, to prevent sour stomach, to which the proprietor attributes all diseases of chickens.

The mash is made by placing on a four-inch layer of dry clover a two-inch layer of unhulled oats and turnips, made mushy and at the boiling-point from steam; on this is placed a two-inch layer of bran, with a dash of hot salt water, then four inches of dry

DAYBREAK

A wind came up out of the sea,
And said, "O mists, make room for me!"

It hailed the ships, and cried, "Sail on,
Ye mariners, the night is gone!"

And hurried landward, far away,
Crying, "Awake! it is the day."

It said unto the forest, "Shout!
Hang all your leafy banners out!"

It touched the wood-bird's folded wing,
And said, "O bird, awake and sing!"

And o'er the farms, "O chanticleer,
Your clarion blow; the day is near!"

It whispered to the fields of corn,
"Bow down, and hail the coming morn!"

It shouted through the belfry-tower,
"Awake, O bell! proclaim the hour."

It crossed the churchyard with a sigh,
And said, "Not yet! in quiet lie."
—Henry Wadsworth Longfellow.

THE PASSING OF USHER'S CHRONOLOGY

USHER's name, however, would never have become a household word but for his scheme of biblical chronology, which, though only one of a hundred and eight different views of the same biblical data (some of which differ from others by no less than two thousand years, had the good fortune to be printed in the margin of the common English version of the Bible. It thus became fastened upon the popular mind, and was gradually invested with a reverence akin to that with which the people regarded the sacred text itself. These dates were first placed in the margin in 1701, and the custom of printing them along with the text has continued to the present time, so that for fully two hundred years the people have been drilled in the habit of regarding them as authoritative. Being familiar and convenient, the scheme has been generally adopted by historians also, and has thus gained still wider currency. But its inaccuracy has been fully established, and the scheme is now obsolete. This has been generally recognized for some years as to certain parts, such as his underestimate of the duration of the Israelitish sojourn in Egypt, in which he is two hundred and fifteen years out of the way, and his overestimate during the period of the dual kingdom, from the disruption to the fall of Samaria, in which his figures are generally about forty years too high. But the gravest difficulties caused by Usher's computation do not belong to either of these periods, but to the much earlier period extending from the creation to the time of Abraham.

Usher's date for the creation is 4004 B.C., and for the flood 2348 B.C. Our readers have probably seen accounts of the recent excavations at Nippur, in Babylonia, by the expedition sent out by the University of Pennsylvania, under the leadership of Professor Hilprecht and Mr. Haynes, and of their claim that the ancient temple of Bêl there unearthed must have been founded not later than about 7000 B.C. This is a staggering figure, and we shall do well not to accept it too hastily, though as a matter of fact it is accepted by nearly all expert Assyriologists, so far as one can judge from opinions published.

The same general conclusion has been reached by the Egyptologists. Prof. W. M. Flinders Petrie assigns to the predynastic kings the date of 4800 B.C., ("Harper's Monthly Magazine," October, 1901), and argues that civilization began in the Nile Valley about 7000 B.C. The fact is that both Assyriology and Egyptology contradict Usher.—W. W. Moore, D.D., in the Union Seminary Magazine.

Sunday Reading

A CURE FOR CRIME

A writer in the "North American Review" asserts that manual training is almost as good a preventive of crime as vaccination is of smallpox.

"What per cent of prisoners under your care have received any manual training?" a Northern man asked the warden of a Southern penitentiary.

"Not one per cent," replied the warden.

"Have you no mechanics in prison?"

"Only one mechanic—a house-painter."

"Have you any shoemakers?"

"Never had a shoemaker."

"Have you any tailors?"

"Never had a tailor."

"Any carpenters?"

"Never had a man in prison that could draw a straight line."—Michigan Christian Advocate.

LEADING SCHOLARS TO STUDY

"A boy will eat, and a boy will drink,
And a boy will play all day;
But a boy won't work, and a boy won't think,
For a boy is not built that way."

That is the ditty we go around whining out. It is untrue, an outrageous libel on the average Sunday-school boy. Sing trustfully:

"A boy must eat, and a boy must drink,
And a boy has need of play;
But a boy will work, and a boy will think,
For a boy is built that way."

We accept it as a foregone conclusion that neither the boy nor the girl will study a Sunday-school lesson when our indolence is the great obstacle in the way. These same young folks must be taught how to cook, sew, and use tools, pen, pencil and brush. They are assisted with their day-school lessons, but we thrust a "quarterly" into their hands, saying, "Study your Sunday-school lesson." Then because they do not, we scowl and give up in despair.

If you desire your scholars to study, work yourself.—Mrs. M. G. Kennedy, in *Illustrator*.

AMONG HEATHEN

Little Polly's mother took a short trip out of town, and Polly was sent to spend the night with a neighboring lady. When bedtime came Polly knelt down with her head upon the lady's knee, as accustomed to do with her mother, to say her prayers. A little form of

her own she remembered only in part, and the lady could not prompt her. So Polly's prayers came to a sudden stop. Then she said, "Please, God, 'scuse me, 'cause I don't 'member my prayers, and I am staying wif a lady what don't know any."—Harper's Bazar.

GEMS OF THOUGHT

Expediency is man's wisdom; doing right is God's.—George Meredith.

I do believe the common man's work is the hardest. The hero has the hero's aspiration that lifts him to his labor. All great duties are easier than the little ones, though they cost far more blood and agony.—Phillips Brooks.

THE SOLITARY HOUR

BY J. B. GREENWOOD

Alone! No human friend is near
With converse sweet my heart to cheer.
Alone! The room seems somber, drear,
Though filled with noontide sunshine clear.

O thou divine, all-loving Friend!
To thee I turn. Now condescend
To visit me a little space.
As we on earth talk face to face,
So, Lord, with thee let me converse.
My joys, my griefs, bid me rehearse
My little thoughts. Tune thou mine ear
The accents of thy voice to hear,
And know. The visit make so sweet
That I more oft with thee to meet
May long and plan.

So when at last—
This world's familiar scenes just past—
A stranger in the heavenly land
Before the great white throne I stand,
O'erwhelmed with grief and fear and shame,
But sudden hear thee speak my name,
Thy voice shall wake the well-known chord,
My soul, upspringing at the word,
Shall raptured cry, "My God! My Lord!"
And feel itself at home at last,
With loneliness forever past.

The Family Physician

By ROBERT B. HOUSE, M.D.

A CURE FOR WARTS

WE HAVE found nothing more generally useful than the repeated application of the end of a bit of wood (a match or toothpick) moistened with acid nitrate of mercury, care being taken to touch only the top of the wart, and not to let the fluid run to the sound tissue. The wart gradually shrivels and finally falls off.—New York Medical and Surgical Journal.

CHANGE OF POSTURE IN SLEEP

Every physician will inform his patient that sleep is always attended with a slight diminution of blood in the brain; but he will also honestly admit that this condition is not the cause of sleep, but rather some inherent rise and fall of the irritability of the nervous tissues, the state of lessened irritability being that of sleep. So much for the scientific explanation of what is alike necessary to the sick and the well, the young and the old—"tired Nature's sweet restorer, balmy sleep." Because less blood in the brain is a necessity to natural sleep, all mechanical agencies are directed to withdraw the blood from that organ to the skin and abdominal organs, and to other parts—for instance, hot foot-baths, brisk flesh-rubbing, cool bathing of the head and hands, a light meal before retiring, massage, etc.

Healthy people can sleep in almost any position, but some positions of the body are more conducive to quiet sleep than others. It is not well to begin sleep while lying upon the back, because pressure of the stomach, liver and abdominal organs, especially when overloaded with a too-hearty meal, upon the great blood-vessels along the spine retard the free flow of the blood. Persons subject to heart-troubles or to dyspeptic and liver complaints will rest better on the right side. All such should avoid mental work a few hours before retiring.

The great soldiers and the most famous ascetics of the world's history learned that they could sleep best upon a firm, hard bed with but light coverings. The story is told of Socrates that he stood from sunset to sunrise upon the field of Marathon, erect and without shifting his position, observing Nature and the sleeping soldiers about him. Either from his observations or those of others since, it is affirmed that at about three o'clock in the morning every sleeper changes his position completely, turning from one side to the other or from the back to one side, as the case may be. Now, the practical deduction from this fact applies not to adults, but to infants. Every mother knows how often the little ones grow restless, and perhaps moan in their sleep at night, or even in their day-naps, and wonders what is lacking in her daily care or in their diet to bring this about. If she is satisfied that everything in the little one's surroundings is as it should be, let her gently turn the baby over to the other side or from its back to the side while it sleeps, and note the results. The baby's muscles need the same relief that those of the adult demand, and can be so relieved, even in deep slumber, by the mother's soothing touch. The child will fall into a more restful and deep sleep in almost every instance, and will awaken greatly refreshed. This process will be especially grateful if the baby has had a day of unusual and always harmful excitement, and may then have to be done more than once in the night.

The baby requires much sleep in the first months of its life, and gets little muscular exercise, especially if the mother or nurse neglects to rub or knead it after the morning bath. Hence the evident necessity of this restful change in its sleep.—Babyhood for May.

The Family Lawyer

By JUDGE WM. M. ROCKEL

Legal inquiries of general interest from our regular subscribers will be answered in this department free of charge. Querists desiring an immediate answer by mail should remit one dollar, addressed "Law Department," this office.

A SOUND WILL.—J. L. G., Ohio, asks: "If a man without children will all his property to his wife, can his brothers and sisters break the will?" If the man is of sound mind and properly executes his will, it cannot be broken by his brothers and sisters.

ADMINISTRATOR'S RIGHT TO INTEREST ON NOTES.—H. L. E., Illinois, inquires: "Can the administrator of a will claim interest on notes that become due after the death of testator, or does that interest go to the heirs?" The interest belongs to the administrator.

INHERITANCE.—A regular subscriber, Missouri, asks: "If a man dies, leaving no will, what are the rights of his widow, the children being of age? Can she not hold her home during her lifetime, it having been purchased?" The children will share in equal portions. The widow is entitled to be endowed or have the use of one third of all the lands during her lifetime. In lieu of such dower right the widow can take a child's part. It must be done in writing within fifteen months after letters of administration have been granted. If she elects to take the child's part it becomes hers absolutely, subject to a pro rata share of her husband's debts. Homestead rights do not exist against the heirs, but only against debts of the husband.

EXPECTING SOMETHING FOR NOTHING.—A subscriber from Long Beach, Cal., says: "I answered an advertisement of medicine for free trial, giving my name and address as requested, also a brief statement of symptoms. In answer I received notice from Wells Fargo & Co. to take out of their office medicine to the amount of seven dollars, expressage seventy cents, total seven dollars and seventy cents. I refused to do so. Can I be compelled to pay for it by law?" You are not bound to take out the package. The advertisement you refer to is but one of the various schemes devised by designing persons to secure patrons for their goods. You may always set it down as a fake when an advertiser agrees to give something for nothing. The charitable instinct in mankind is not yet developed to so great an extent as to make miscellaneous gifts to whoever may apply. It is a rule in every sphere of life that whatever is worth anything will require a valuable consideration to procure it.

BOUNDARIES OF LINE, ETC.—S. B. F., Florida, propounds the following: "Suppose A. and B. own adjoining farms, and several years ago A. had his land surveyed, and now B. has his land surveyed, and it takes part of A.'s land. Which survey holds good, supposing both are done by a county surveyor, a person elected by the people for such work? Can A. prohibit B. from moving any improvements on his (B.'s) land according to his (B.'s) survey?" The presumption of the second survey being correct would be as good as the first survey, therefore there would be no difference in validity of the surveys, and the question still would remain which survey is the correct one. This could only be determined by a resurvey, to ascertain which survey is correct. Until the matter is correctly determined A. could prohibit B. from moving anything off of the premises. If A. has occupied the land according to his survey for a period of twenty-one years then his line as surveyed could not be changed.

CHAPTER II.

IF SYLVIA had been a self-conscious person there would have been something of a pose in her residence at The Bend—an attitude of the angel in their midst to the folks at The Bend, and an assumption of eccentric philanthropy to her Sedgwick acquaintances. She had expected some difficulties, and as they arose she met them in exactly the same spirit with which she had set about her explorations of the long ridge of hills a year before. She had heard of the Indian relics, mounds and other things there which aroused her curiosity, and so she calmly proceeded to investigate, much to the scandalization of some of her aunts' ideas of feminine propriety. Smoky Bend interested her, and she had theories she wished to try. So her little house was made ready for her with whitewash and some repairs, and with genuine enthusiasm she set about her self-appointed task of making it an object-lesson within and without.

The occupants of the score or more squalid cabins scattered about took her presence there variously. The men slouched past, and made jokes about "the quality" invading The Bend. The humped and unkempt women came to the cottage, and took stock of its contents inquisitively, but quite in silence, dipping snuff and expectorating unremittingly the while. The children hung in a ragged fringe over her low fence, and retailed the remarks of their elders, as Sylvia and her faithful old nurse swept, and dug, and planted—mornings—glories by the shed-porch, balsam-vines by the fence, and quick-growing vines everywhere else that would add beauty or hide ugliness.

"Pap says he 'lows that you has come here tryin' to smell out moonshine whisky," volunteered young Silas Perkins; whereupon Thad Hughes added, sententiously, "And my pap says that folks as fool about what ain't none of their business gets the'r lights put out sometimes quicker'n they can fix!"

"You shet up," commanded Sol Basset, a larger boy. "When I told pap what old man Perkins said, he says, 'It's the hit dog what hollers!'"

Then the old-faced youngsters on the fence set up a laugh, in which Sylvia joined, and pushing back her broad hat, the clustering red-brown hair showed.

"Ma says she bets you tie that hair of yours up in rags to friz it," ventured Sally Warner.

"It's awful pretty," said Serena Perkins. "Does you grease it to make it shine?"

"No," Sylvia replied; "I don't. Do you think it is pretty? Well, I will show you how I do." She tossed aside her hat and shook down the rippling glory. "Get my brush, Aunt Clarissy," she said. "Now, see here—this is the way I make it shine! I wash it very often, but every night of my life I brush it fifty times on this side, and fifty more on that!"

"Does you tie it up in rags?" inquired Sally.

"No, I do not; but I might if it were not curly. I like curly hair, don't you?"

"Shore!" she answered, succinctly, and "me, too!" piped a chorus of shrill little voices.

"I'm tired," Sylvia said at last. "I'm going over yonder under those oaks to rest."

The children straggled along after her, and then and there, without a suspicion of it on their part, began Sylvia's school. Probably there was never another such school—no house, no books, no rules, no stated times. Some days the motley assembly, headed by the tall girl, spent long hours on the banks of Coon Creek, fishing idly, talking amicably, and occasionally adroitly beguiled into taking baths in the shallow, limpid waters of the creek by Sylvia's careless remark as she left her house, "I am taking some more clothes, so I can go in bathing."

They hung about her constantly. When the vines began to grow around the cottage they helped her to train them; they went with her out in the wiregrass to hunt Aunt Clarissy's hens' nests, and if she elected to sit on the porch to read or sew, they sat around as quietly as they could. Sometimes she told them stories; and they were just such stories as she would have told to the daintiest children of her acquaintance—stories of noble deeds, of great achievements, of beautiful gardens and palaces, or old-time myths. She would watch curiously and hungrily for the rare flashes of enthusiasm which now and then would light up the old-young faces.

With the elders she had less communication. The men, however, had looked upon her with increased respect since the day she had coolly walked up to a group lounging in front of Jake Harley's shabby store, and invited them to try her skill with the pistol. There were men among them of no mean skill, but none who equaled her in quickness and accuracy. After that occasion she had never been troubled with suspicious noises at night, and it did not occur to her that she was not perfectly safe there.

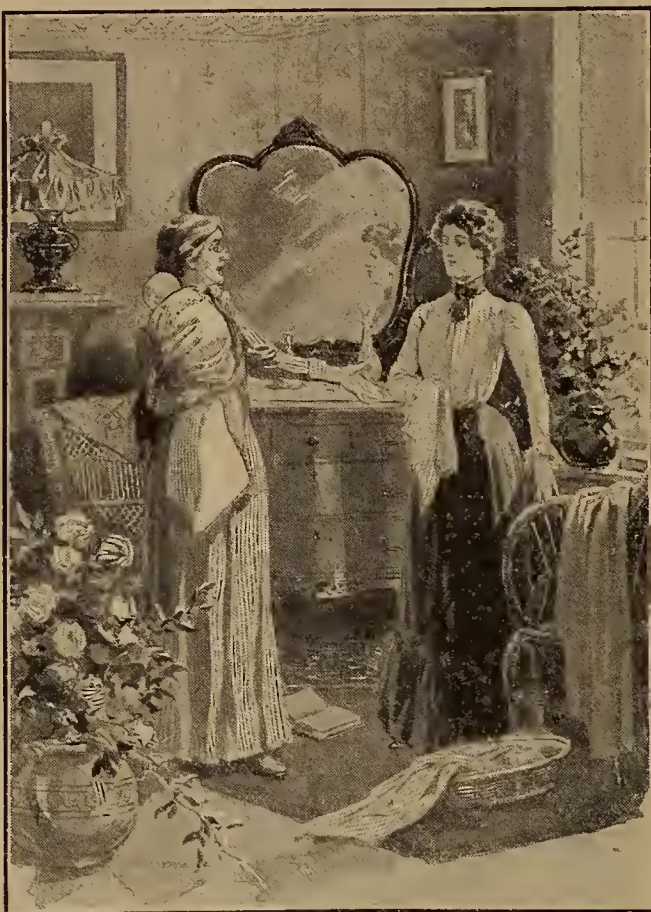
The women soon began to come to her, asking her to help cut and fit garments. Sometimes they would bring coarse muslin and Turkey-red cotton, and ask to be taught some fancy stitches. She would glance from the pitiful materials to the piles of gay cushions on her lounge, and smile to herself. By that and other signs her heaven was working, and she felt that all her theories were correct. She began to indulge in day-dreams, and made plans for a settlement here at The Bend similar to the one which she had once visited, and which had interested her more than anything else had ever done.

She had been at The Bend some three months

A Reflex Influence

By SUSIE BOUCHELLE WIGHT

when the awakening came. The most attractive woman who came to her was the young wife of one Tim Burns. She was often at the cottage, and at her own request Sylvia was teaching her to read. Her progress was remarkable, and she was so quick to catch an idea that she had already learned to fashion her baby's garments more neatly. Sylvia was delighted to note the increasing tidiness of the Burns cabin.



"Springing to her feet, she repeated, 'What's the use!'"

One day Milly came as usual for her lessons, and read them over meekly and patiently. She seemed downcast, and Sylvia, thinking to encourage her, said, "How fast you learn, Milly; and only see how prettily you have ruffled Charlie's little dress!"

A storm of tears followed this remark, and Milly burst forth, "What's the use. I'd like to know!" Springing to her feet, she repeated, "What's the use! If I were to work my fingers to the bone I could not have things like other people!" She made a quick motion toward the furnishings of the room. "It is no use in the world for me to try to hold my head up and be somebody when I am tied to Tim Burns, and him a-drinkin' bad whisky all the time and—" She checked herself for a moment, before she went on, defiantly, "Yes I will say it—drinkin' bad whisky and—makin' it!" She flung herself out of the room. Sylvia arose as if to follow; but the woman was almost running down the road, and something forbade Sylvia from going to her with the words she wanted to speak. She scarcely knew what she would have said even had she followed. She had honestly meant to help these people, and it had never occurred to her that she ran a risk of making them dissatisfied with their lot, and to no good purpose.

She felt uneasy and restless, and although the sun was now high and shining hotly, she got out her wheel, and in a few moments was flying down the road for one of her visits to Sedgwick, ten miles away.

"That's the difference," she said, bitterly, as she glanced back at the rough huts huddled under the oaks. "I can run away when I get tired of it, but they, poor creatures, just have to stay, and they do not know any way of making the best of it!"

She had been home only once since taking up her work at The Bend, and this time Miss Mary was determined to make an occasion of it. So Tom Channing was sent for, and he came, bringing with him a college friend who was spending a few days with him.

Sylvia greeted Tom warmly, and held out her hand cordially to his friend Doctor Armitage, coloring faintly as she saw his dark face light up with pleasure at the sight of her splendid young beauty. Sitting on the broad, vine-shaded veranda, they all fell into an interested conversation, and Miss Stasia involuntarily relaxed the severe lines of her face while listening. She had missed Sylvia more than she would have cared to acknowledge. During the girl's other long absences she had always had the consciousness that vacation would bring her back to be as much of a problem on her hands as ever, but this time the parting had seemed so final. So strong herself, it was weakness which appealed to her affections most. Sylvia had never been sick a day, never had cried like other children, and so there had been no outward and visible sign of love between the two. She had insistently denounced Sylvia's Bend project as a piece of perfect foolishness. Those people were in sound of the gospel if they wanted to hear it, and as for

studying them—why, there was no sense at all in studying dirt and rascality!

Sylvia glanced now and then at the softening features, and wondered. "Tommy," she said when an opportune moment came, "is Aunt Stasia getting pretty in her old age, or is it only that her face, as well as her grammar, seems improved by contrast with The Bend?"

"Neither, my child," he answered, oracularly. "It is the light of love shining through. I have discovered that she really is very fond of you. I think the knowledge is dawning on her, too, but she is doing her best to hide it. Watch her swat Towser as she passes him!"

They both laughed, and Sylvia went on with her recital of things which had happened at The Bend, perfectly mimicking droll sayings and mannerisms of different individuals, but with such good-nature that there was no suggestion of ridicule in it. She was glad to throw aside for a while her uncomfortable experience of the morning, though she would go back on the morrow and take up her study of mankind again.

"Who are these people?" Doctor Armitage asked.

"Why," Tom answered, "they seem to be a sort of lost tribe of our usual class of poor white people. They marry, and are given in marriage, with outsiders, but the main body of them have stuck pretty closely to their chosen habitation for nearly a hundred years. As the huts rot down over their heads they knock together others as shabby, and live on in the same way as did their fathers before them."

"How do they make a living?"

Tom and Sylvia looked at each other, and laughed. "That would be considered a very impolite question at The Bend, Doctor Armitage," said the girl.

"They make moonshine whisky, according to popular report, and although no one ever sees young pigs or calves there, great quantities of hogs and cattle are yearly marketed from The Bend," said Tom. He gazed dreamily at the ceiling, then continued, innocently, "Their mark for their animals is unique—simply what they call 'a dishin' cut in both years,' leaving those organs quite in the shape of the thin crescent of the new moon."

"I see," said Doctor Armitage, laughing, "and incidentally obliterating any previous marks."

There was no shadow of a smile on his face, however, when he turned to Tom as Sylvia left the veranda. "And you, her nearest friends, allow that young girl to live alone among those lawless people." There was an accent of scorn in the stern voice, and it fairly flashed from the deep-set gray eyes.

Tom straightened up, with heightened color. "Now, don't distress yourself, my dear friend. That young girl looks very fair and soft and innocent, and she does not deceive her looks at all, but she is most abundantly able to take care of herself; and if she chooses to go to a place, there is no power on earth that I know of to prevent her now that she is her own mistress. As for her staying there alone," he said, with softening voice, "I regret to say that for three years past I have on every suitable occasion offered my most desirable company on exactly the same terms which Ruth made to Naomi, and she gently but most firmly—declines."

"Forgive my hasty speech, Tom," said Doctor Armitage.

After a silence Tom continued, "Her going to The Bend is not so strange to me. Sociology is as much a fad with her as is music or art to other women, and from a child that community has always had a peculiar fascination for her."

"She is not actuated by a consecrated love for humanity?" asked his friend.

"Not by a good deal. She loves humanity in a general way all right enough, but as for the consecration—she is not religious in the smallest degree. I have thought sometimes, though, that if Aunt Stasia had been a gay and giddy mortal Sylvia would have grown up rabidly pious," and Tom laughed softly to himself.

"I do not understand," said Doctor Armitage. "Is she so perverse as your remark would imply?"

"You seem rather curious about that young lady, Hugh. I wish you might know her—it would be a liberal education for you. As to her perversity—well, yes, she is an artist in it. So far as the letter of the law went she always obeyed her guardians with an implicitness which was touching to witness, but for all that she is the most thoroughbred rebel I have ever seen."

The long, drowsy September afternoon wore pleasantly away. Home seemed inexpressibly restful and lovely to Sylvia, and one side of her nature tempted her to stay there, but a resistless impulse told her that her work at The Bend was not yet done.

She had never seen Doctor Armitage before, but his name had once been very familiar to her as Hugh, the chum of Tom's college days, and as she lay idly swinging in the hammock her memory was very busy. Tom had gone away to school as wild a daredevil as Sedgwick had ever produced, and had come back after a few years as virile as ever, but with all his energies directed in an entirely different channel. This change had always puzzled Sylvia; but she could not speak directly to him about it, for religion was involved in it, and that was a tabooed subject between the two since their one never-to-be-forgotten quarrel over it. Somehow she began to understand what had brought

about Tom's apothosis as she watched Doctor Armitage's dark, ascetic face, and listened to his deep voice, as he and Tom exchanged experiences of their college life after they had separated to study their different professions. She remembered that Tom had once spoken of his friend's deep devotion to the simple faith in which he had been reared. Everything about the man bespoke quiet strength and steady, unyielding purpose, but there was something very winning in his smile, manner and certain tones of his voice which hinted of unknown depths of tenderness to those whom he might love. Sylvia was ashamed when she found herself at this point in her reverie, and shook it off, recalling her own work.

"I forgot to tell you, Sylvia," said Tom, "that Hugh is convalescing from an attack of typhoid fever, which fact accounts for this visit. I could never persuade him to leave his work before?"

"Are you so busy?" she asked, turning her head to look at Doctor Armitage.

"I was," he replied, "and my patients were of a class who objected to anything like an exchange of professional courtesies when it came to allowing another man to dose them."

Sylvia's face expressed her curiosity.

"I was house-physician at The Morgan Settlement," he said in answer to her look.

"Oh, really!" she cried, raising up impulsively, and steadying the swaying hammock with her hands. "I visited that settlement once, and I was more interested in it than in anything I had ever seen. If I had not been the most useless creature in the world I would have begged them to let me stay and help."

"You would have made a beautiful ornament, Sylvia, though you are rather large to do a butterfly rôle," said Tom.

"Don't you worry," she retorted. "I will learn to be useful before always." Then, turning again to Doctor Armitage, she continued, eagerly, "I think you might be able to help me with some suggestions about what I am trying to do at The Bend. It seems to me that more is done for every class than for that which we now know as 'poor white,' and as it came in my way lately I have gone to live among them for a while merely to satisfy myself that they can be helped—easily. I am afraid I was oversanguine as to the easiness of it, but I am not ready to give over my little experiment. Tom, you must bring Doctor Armitage and the aunties out some day this week to spend the day at my little settlement!"

"I should love to go," said Doctor Armitage. "I am very much interested."

"And who would not be?" Tom grumbled to himself. He had fished for an invitation to The Bend until Sylvia, growing tired of his hints, had told him plainly to keep away; and now that the invitation was given, he did not half appreciate it.

[TO BE CONTINUED]

GAVIN'S FORTUNE

BY FRANK H. SWEET

THERE was elation in the Labou cabin that night, and Gavin's violin—"feedle," he called it—flung out its music wildly, enthusiastically; and though the one shutter and one door of the cabin were closed, to keep out the chill night air, the hilarious chords drew several Indians to the entrance of a wigwam a few rods away, where they stood listening and nodding with grave approval, and where they were presently joined by a young man with pale, delicate face and narrow shoulders.

Every night Gavin's violin made music in the depths of this great Northern forest; but it had been dreamy, plaintive, expostulatory, sometimes imperious, as of an imprisoned soul questioning its own imprisonment and demanding knowledge of the unknown. Never before had it been heard like this—bounding, soaring, rapturous. It was a waterfall breaking into a thousand diamonds in the sunlight; a jubilee of birds at the dawning of a perfect June day; the exultation of a soul breaking from its shackles. The young man drew a long breath.

"It is wonderful," he murmured. "That man is a poet, a master."

"Me bring him letter to-day," one of the Indians observed, sententiously. "Mebbe somet'ing nice."

Then suddenly, in the midst of a galloping allegro, the music stopped abruptly. Gavin had found even the delicate, responsive strings of his violin inadequate to the strange madness that was bounding through his veins.

"Mudder," he said, scarcely recognizing his own voice, as he laid the violin aside and rose to his feet, "what you t'ink? It be won'erful, eh—won'erful?"

The old woman, who was journeying between the table and fireplace, looked into the eyes that were gazing down at her. She never ceased to feel surprise that this grave, broad-shouldered man was her son; and with the surprise was ever a strange mingling of tenderness and reverence.

"Ya," she acquiesced, placidly, "it be 'stonishin'. But who more right for plenty money den my Gavin? Always it seem to me like dis." She carefully placed her bread-board in front of the fire, then rose and looked comfortably about. "Always like dis it seem," she continued, "an' I make plan when it come. Dat wooden sink be take out, an' dose shelf dat be in de way; an' in de place I fix a big easy-chair, an' a somet'ing to hol' de feedle. Den we build anudder room for dishes an' for t'ings we eat, an' we hab iron sink an' doors to hide de shelves; an' dere shall be a cow to put in de shed, an'—an' mebbe a horse. Ya, it nice to be reech. What you t'ink, Gavin?"

But already his thoughts were sweeping on into the golden halo which encompassed his future, groping back into his past for the ambition he had put aside, and bearing it triumphantly toward the wonderful things that were to come. There were gray hairs about his temples, and more years had been lost to his manhood than he had known before; but all this was forgotten now, and he was back where he had chosen the invalid father and small children and duty. Only now the duty was accomplished, and the energetic little mother would be a help instead of a hindrance to the ambition which was restored to him. The father was at rest, and the children were grown up and scattered; and now had come this money—riches beyond his wildest imagination.

Yes, he would go out into the great world and learn music, as he felt that it could be learned. He would seek the best masters, and give them handfuls of money to show him, and would study and study until he could express all the beautiful things which came to him, but which his fingers were now too ignorant to translate. The people here thought he could already play, but they did not know. He was only a poor trapper and lumberman, who had picked up a few things in the woods. If he played, it was as the birds sang, or as the winds chanted, or the brooks murmured, just as it came to him. He had learned nothing, nothing. Even the boys whom he sometimes guided through the woods knew more than he, for they could point out the notes on the sheets of music which they occasionally brought him, and which he always laid aside reverently.

But it was wonderful the way the good God was arranging things. What if he had saved that plainly dressed man from the flood years ago, even at the risk of his own life? It was only what any decent man would have done. And who would have thought of him as turning out to be a rich man, or of his dying and leaving his money to the poor woodsman he had known scarcely an hour? But so it was. The letter was from a lawyer, and it said the money was there, subject to his order.

Well, in the morning he would go and arrange for its use. His mother should not have the little room she was planning for, but a brand-new house, with plenty of rooms; and she should not only have a cow and horse, but a good carriage to ride in. He would build a sawmill, where all the neighbors could work, and a school, where all the children could be educated, and every boy and girl who wanted to be a musician should be sent to the best schools the country afforded. There was that young man who had come into the woods for his health, and who was living with the Indians to learn their ways. He would give him enough to finish his theological course and to begin the missionary-work he was planning. The money must be put to the best use. It had not come to him by accident. No, no; it was from God. Then when they were provided for he would go away and learn the things he had given up more than twenty years before.

A low knock aroused him. Crossing the room, he swung back the door with a "Come in," adding, cordially, as he saw the dim figure more clearly, "Oh, it's you, Mist' Ant'ony! Come in! Come in! Me jes' t'inkin' 'bout you."

The young man who was seeking health in the woods came forward into the firelight.

"I have been listening to your music, Gavin," he said, warmly. "It is wonderful! I have heard a good deal of playing, but none that seemed quite like yours."

Gavin raised his hands deprecatingly.

"Non, non," he expostulated; "my play be all pick-up music, not'ing. Me know not one single—what you call him?—note, non." Then a sudden illumination transfigured his face. "But me go 'way now, learn everyt'ing. See dis." He opened his letter and offered it for inspection.

The young man glanced at it carelessly, then with sudden intentness.

"What! You don't mean—a hundred thousand!" He read the letter the second time more carefully.

"Yes, it seems all straight."

"Yes, all straight," said Gavin, trying to control the joy which made his voice tremulous. "Me get him to-morrow. Den plenty t'ings do. S'pose we talk 'bout him. See what you t'ink."

Rapidly he went over his plans concerning the sawmill, the school, the best way of helping his friend, and finally his own education; then suddenly the young man rose to his feet with flushed face.

"No, no, Gavin," he objected, "we'll leave me out, if you please. Much obliged to you for thinking of me, but I'm all right. My doctor told me to drop books and stay in the woods a year. I've been here a month, and am like a new man already. At the end of a year I will go back and work my way through by teaching school and giving private lessons. There will be no difficulty."

Gavin regarded him for several moments in silence.

"Lose time," he said at last, sententiously. "Better do work dat count. What dis money for? You know how come. You know me want him go right. S'pose you help, den pay back some time by helping some udder body. Ain' dat best?"

The young man struggled with himself for a moment, then held out his hand impulsively.

"Let it be as you wish, Gavin," he consented. "I pass it along."

Gavin started at daybreak, walking fifteen miles to the boat-landing at Slade's sawmill. It was late in the afternoon when he reached the lawyer's office. There

were several clients ahead of him, so he went composedly to a window and waited. He had been in town but a few times in his life, and never in a lawyer's office before; but he was thinking of the future, not of himself and his surroundings.

Presently the lawyer looked at him inquiringly, but hurried forward as Gavin drew out the letter.

"Ah, Mr. Labou," he exclaimed, "let me congratulate you on the acquisition of such a nice little property. We have arranged everything according to the testator's wishes, so there will be no trouble. You can have the money or leave it in our care, just as you wish. But we have several very promising investments on hand just now. Here, take this chair. Give me your hat."

Gavin smiled contentedly as he dropped into the lawyer's own chair and relinquished his hat. Deference of this kind was late coming, but it was very pleasant.

"Guess mebbe leave most with you till need," he acquiesced, "but mus' have some for frien', an' to buil' sawmill, school-house, road, an' buy t'ings. How much dat take?"

"Oh, I don't know. We'll figure it out between us," smiled the lawyer. "A small sawmill and school-house won't cost much." He drew his chair close to Gavin and lowered his voice a little. "There's another matter I wish to speak to you about," he said. "It doesn't amount to anything, but if you should hear of a rival claimant you need feel no alarm. The estate is yours as surely as a perfectly legal document can make it."

Gavin's eyes questioned him steadily.

"It is this way," the lawyer went on. "My client had a daughter, who married against his will, and who died over in Canada many years ago. He supposed she was the last of his kin. Recently a letter came from a girl who is teaching school in New Brunswick, and as his lawyer I opened it. The girl claims to be the woman's daughter, and writes that in looking over her mother's papers she found her grandfather's address. She does not know he is dead or that there is any money. She merely wishes to learn something of her family."

"You t'ink she de gran'chil' sure?"

"Well, yes, I do," admitted the lawyer, candidly. "The letter seems straightforward and sincere. I have investigated the matter a little, and really believe she is what she claims."

Gavin rose calmly to his feet.

"Den why you sen' for me?" he asked. "De money 'longs to de gran'chil'."

"Oh, no," said the lawyer, hastily; "the will gives it to you. I have no authority in the matter whatever, except to follow out the conditions of the will. But I have thought—perhaps—you might give her two or three thousand dollars. That would be a fortune to her."

"All hers," insisted Gavin, positively. "You write an' tell."

He took his hat, and started toward the door. There he paused irresolutely.

"No," he said, coming back suddenly; "s'pose you give me de 'dress. I go talk to de gran'chil' myself. You see, dere's a young man who want to be missionary, an' he ain' strong. Tree, four hun'ed dollar fix him all right. Den de school-house need t'ree, four hun'ed more. One t'ousan' do him all. I talk to de gran'chil', an' mebbe she fix dem two t'ings like me say, mos' likely."

They had expected him home on the third day, but it was the tenth when he appeared before his mother at the end of the cabin. The young man saw him, and came from the wigwam.

"There be no money, mudder," was his first greeting. "Anudder come firs'."

"Ya," said the mother, cheerfully; "den me keep use de wooden sink. An' if dere be no cow, dere be no cow to ten'. Dat be more easy."

The young man nodded assent.

"It is only hard on you, Gavin," he said, sympathetically. "As for myself, you know I tried to refuse your proposition."

An odd light came into Gavin's eyes.

"Dat all right, Mist' Ant'ony," he smiled. "You keep on get strong, den 'fore long mebbe you find t'ings all fix—like school-house be fix."

KEEP A BRAVE HEART

BY HELEN WHITNEY CLARK

Keep a brave heart! Though night draws near,
And sullen glooms the sky,
Another day will soon appear,
A brighter dawn is nigh!

Keep a brave heart! The lark will sing
Though threat'ning looms the hour,
And April skies but weep to bring
For us May's fairest flower.

Keep a brave heart! Though shades obscure
All brightness from thine eyes,
The bow of promise, fair and pure,
May glow on evening skies.

Keep a brave heart! Should fortune lower,
Let not thy spirit quail;
Look up, as does the storm-bent flower,
And weather wind and gale.

Keep a brave heart! Heaven's glorious blue
No night can long enshroud;
God's sun still shines with fervor true
Behind the darkest cloud.

OUR FASHIONS

ONLY a short time ago everything in a woman's wardrobe partook of mannishness; to-day everything is the reverse. Clinging, gauzy materials enter into all the details of the present woman's dress. Lingerie, that used to be made of muslin for durability, is to-day conceived in the finest, sheerest cambric, linen lawn, and frequently China silk.

The luxuriousness of such apparel is not confined strictly to the wealthy class, as the price of these materials brings them within the reach of the woman of moderate income. To-day's woman differs from her grandmother by making a point of quality rather than great numbers of garments.

Hosiery approaches the gauziness and transparency of veiling, and girls are proud of their dainty belongings, caring for many of them themselves.

Luxury abounds everywhere. Wedding-gowns are constructed of different transparent materials, many ignoring the heavy silks and satins.

Vertical tucks appear as a trimming upon many of the cotton gowns. Straps of the material piped with a contrasting color, and held in place by pearl buttons, is a favorite decoration. Accordion-plaiting is very popular. There is nothing prettier for little girls' skirts than the material fashioned in this way.

MISSSES' "MONTE CARLO" COSTUME

This smart costume for a young girl consists of a "Monte Carlo" coat over a gown of pastel-green etamine, surmounted by a hat of white chip with pale pink roses.

The coat, of the latest design, is of black taffeta silk trimmed with applications of cream lace and bands of black velvet. The black silk coat has become a standard feature of the well-dressed, from my lady down to the wee ones of three and four years old.

The skirt of this costume is laid in box-plaits, that are stitched to flounce-depth, making a graceful flare at the bottom of the skirt.

SHIRT-WAIST GOWN

Among all the styles this still continues the favorite with the woman seeking comfort in very hot weather. The material employed can be anything from silk to cotton. In silk, trimmed with tiny black silk ruchings, this answers for a dress for many occasions; of wool grenadine, trimmed with medallion lace, with a belt and a tie of a color, it would grace a more formal occasion, while if the wearer chooses a pretty lawn, batiste, chambray or dimité it can still continue to be a model well worth copying.

The skirt to wear with this waist varies as much in cut and style as it does in material. It is a well-gored skirt, finished with a graduated flounce. It can be of the same material as the waist if desired. The flounce can be finished with a double ruching of white lawn if of a wash-goods, making a pretty contrast.

Everything is now employed to give a frou-frou appearance and to simulate more fullness throughout the entire costume.

A suit of this kind, of navy-blue foulard silk with a large scattered polka-dot in white, makes a very striking dress after this model, making the ruchings of white China silk gathered through the middle. A stock and belt of white can be worn with it, and can be either of velvet or silk.

The demand for mother-of-pearl buttons and ornaments of all kinds was never greater, being the favorite fad of the season.

TRAVELING-SUIT

In this suit we give an excellent model for traveling. Made of écru wool crash, of convenient length for walking, this graceful dress is attractive in the extreme. If desired it can be made up entirely plain, with only stitching as an ornament, using a dark green velvet for the collar and belt. In the model illustrated the revers, cuffs, tie and parasol are of a dark silk with white figures and strips of black velvet, with a smart walking-hat of Milan straw, trimmed in black and white and coarse straw trimmings.

This pattern lends itself to firmer materials, such as light-weight cloth or heavy linen or piqué.

VIOLE AND LACE COSTUME

This is a smart costume for cool afternoons in summer when made of black viole, which is really a

How to Dress

plainly woven grenadine. The trimming employed is cream guipure lace or any of the coarser laces over white silk. To make this exceedingly effective some parts of the pattern of the lace is dotted in French knots in black silk; or if wanted for a smart occasion, scarlet purse-silk can be used, with a belt of folded scarlet satin with cut-steel buckle or a cameo belt-pin. Soft louisine ribbon makes an effective belt also.

In soft gray this costume should be trimmed with a shade darker of the same color, using pipings of pale pink wherever it can be done. Black lace in medallion



MISSSES' "MONTE CARLO" SUIT



VIOLE AND LACE COSTUME

patterns is used upon the plaits of the flounce, also in the waist and sleeves. The effective lace collar can be of any of the season's patterns, many coming in various materials already made up.

AFTERNOON-GOWN

This charming afternoon-gown is in flowered muslin showing yellow roses on a white ground, the three graduated flounces giving the desired full effect to the skirt.

The waist is in the open effect, with which a short vest can be worn. When the vest is varied it gives the freshness of a new dress every time it is worn. These vests can be made of chiffon, which is puffed, with narrow black velvet between, or of any of the pretty sheer tucked materials that are in vogue.



SHIRT-WAIST GOWN



TRAVELING-SUIT



AFTERNOON-GOWN

Black lace edging would make a very striking and appropriate trimming for this gown.

LITTLE BOYS' DRESSES

These still continue to be made in the Russian-blouse style, with "knickers" of the same material worn underneath, and which are confined at the knee with a rubber band. The blouse has a tiny vest of the material and insertion, with a large sailor-collar. These are made of insertion and embroidery edging, or of the material and tape trimming. Some of the vests have an anchor in blue or black embroidery upon the front. If the dress is opened in the back a large Rubens collar is worn. The collars are quite a

decorative addition to the little suits, and can be sewed to the dress or made adjustable and buttoned on.

The finishings of little boys' garments should be very neatly put on. All seams should either be French seams, which are sewed close to the edge on the right side, then turned and sewed on the wrong side in a wider seam, or they should be bound with soft India linen. In the "knickers" the seams should be cut closely, pressed open, then covered with tape or a bias strip of the material.

The buttonholes down the blouse from the collar should be concealed and not cut clear through.

In several cities and towns this branch of industry is being taken up by young girls for pin-money. It can be done at home, and can be divided by one making a specialty of boys' clothes, another of little girls' clothes, and still another of infants' layettes exclusively. In this way no one would interfere with any other one, and it is astonishing how much call there is for workers in this line of work, that now has very few competitors. Patterns of all kinds are so easily obtained through papers or pattern-stores, and if this line of work is taken up it is well to inform one's self not only upon styles, but upon materials suitable for boys' wear.

The style in shoes and stockings for little boys' this year is the low sock, which comes in all colors and lace effects. White hosiery, however, is given the preference for dress occasions. White shoes with patent-leather toes or tiny patent-leather ankle-strap slippers are worn. This style is confined to boys under four years old.

FASHION HINTS FOR SUMMER

The "Gibson" effects remain popular, and are particularly well suited to piqué, linen, duck and madras.

The vogue of hand-embroidery, which has entered so largely into the decoration of handsome silk and cloth gowns for spring, continues, and many of the new blouses and shirt-waists show this embellishment.

A special feature of all the new colors this season is the soft tint made by blending one color with that of another—gray with greens and blues, brown with reds, etc.

Foulards showing polka-dot designs in both black and white and dark blue and white are especially well liked for shirt-waist costumes.

Black Chantilly is one of the most popular laces of the season, and is employed on net, mousseline, chiffon and thin silk.

Since many of the summer gowns have elbow-sleeves, bracelets will be popular, and they are shown in variety.

Parasols to match the gown are a new style; the "Dolly Varden" is quite the latest in the chiffon variety, and is made, as the name implies, of flowered material and decorated with ruches.

While hats are large, they are light in weight. Neapolitan and Tuscan straws are much employed, and combined with tulle or chiffon produce very airy creations indeed. Hats are invariably broad and flat, with a little droop at the back and trimming ends that fall over on the hair.—The Delineator.

Any of these patterns furnished from this office for ten cents. Waist and skirt can be purchased as separate patterns.

VIOLE AND LACE COSTUME.—Waist, No. 4156. Bust measures, 32, 34, 36, 38 and 40 inches. Skirt, No. 4124. Waist measures, 22, 24, 26, 28, 30, 32 and 34 inches.

AFTERNOON-GOWN.—Waist, No. 4160. Bust measures, 32, 34 and 36 inches. Skirt, No. 4065. Waist measures, 20, 22, 24 and 26 inches.

TRAVELING-SUIT.—Waist, No. 3872. Bust measures, 32, 34, 36, 38 and 40 inches. Skirt, No.

4151. Waist measures, 22, 24, 26, 28 and 30 inches. MISSSES' "MONTE CARLO" SUIT.—Coat, No. 4155. Sizes, 12, 14 and 16 years. Skirt, No. 4159.

SHIRT-WAIST GOWN.—Waist, No. 4150. Bust measures, 32, 36 and 40 inches. Skirt, No. 4092. Waist measures, 22, 24, 26, 28, 30, 32 and 34 inches.

A GOLDEN OPPORTUNITY

The ladies of our FARM AND FIRESIDE family are greatly interested in the Dot Contest; and why shouldn't they be, with a grand prize of \$500.00 cash open to them, and 206 other cash rewards. Everybody has an equal show in the contest. Count now. This is your opportunity. See page 19.

AWFUL

RAGSON TATTERS—"So yer didn't hear about poor Bonesy. Why, dey had ter put 'im in a loonetic 'sylum."

Wearry Waggles—"W'at fur?"

Ragson Tatters—"He swiped a box o' w'at he s'posed was condensed soup from a grocery and lugged it ten blocks before he discovered it was soap instead o' soup."—Philadelphia Press.

READY FOR THEM

Not so many years ago there was a veteran teacher in a boy's high school, who often made his class wince under the lash of his bitter sarcasm and ready wit. One day a little, half-starved yellow cur strayed into the school, and the boys thought they saw a chance to express their feelings toward "Fussy," who was busy in another room. The frightened mongrel was picked up, quickly fitted with a pair of large wire spectacles, and placed on the teacher's chair. "Fussy" entered the room, walked to his desk, calmly surveyed the work of his pupils, and then, turning to them, pleasantly said, "In my absence I see you have held a business meeting, and elected one of your number chairman."—Argonaut.

MR. ADAMS

A tiny little up-town girl, whose father and mother attend the Park Congregational Church, is very much interested in her infantile way in the story of Adam and Eve. It happens that the young minister of the church, the Rev. Clinton B. Adams, is a frequent visitor in the little girl's home, and she cannot disassociate the minister from the first tenant of the Garden of Eden—a state of affairs associated in her mind by the similarity in the names. The other day she was looking through an illustrated Bible, and came upon a picture of Adam clad only in a garland of fig-leaves. Hiding her face in her hands modestly, she cried, "Oh, look, mama! Here's Mr. Adams, and he hasn't any nightie on!"—Philadelphia Record.

A POSITIVE OPINION

One of the constituents of Judge Culberson, the father of the present senator from Texas, had wagered that he could get a definite and decided opinion from the old man, a proposition so unlikely that it created no little excitement in the Texas town in which the Judge resided. It had been stipulated that the bet should be decided in front of a livery-stable, where Judge Culberson liked to spend some of his leisure hours.

A crowd collected, and as they discussed the state

Wit and Humor

of the weather and the condition of the crops a newly sheared flock of sheep was driven by.

"Judge," said the man who had made the wager, "those sheep have been sheared, haven't they?"

"It looks like it, on this side," replied the Judge.—New York Tribune.

THE JOKE WILL TURN

Chauncey M. Depew, the senator from New York, and Samuel L. Clemens, the humorist, were crossing the ocean on the same steamer. One evening, after dinner, it was suggested that, following the time-honored custom in the United States, the diners make speeches. Mr. Clemens made a characteristic address, such as might have been expected from one whose writings are so well known under the nom de plume of Mark Twain.

"It was understood," said Senator Depew, when called upon to speak, "that Mr. Clemens and I should write out our speeches for this occasion in advance and then exchange manuscripts. We have done so, but I regret to say that I have forgotten Mr. Clemens' speech."

The senator then took his seat. His auditors roared in appreciation of the joke.

The next day an Englishman met Mr. Clemens on deck.

"I say," he remarked, "I have always heard that Senator Depew was remarkably clever, but what wretched drivel of his that was you were obliged to recite last night."—New York Herald.

A THRILLING STORY

William Townsley, of Cleveland, is fond of telling an especially thrilling story.

"Some time ago," said Mr. Townsley, "I got on a train at Erie, Pa., and started for Cleveland. When about half way to Cleveland a woman got on the train with a small pet dog. She was refused admittance to the ladies' coach with the dog, and the brakeman finally suggested that she put the little creature in the baggage-car. She indignantly scorned the suggestion, and was finally told that if she wanted to brave the discomfort that she might find in the smoking-car she could sit there with the dog. Giving the brakeman an indignant glance, she walked into the smoker. She took a seat just behind a husky-

looking commercial traveler, who was smoking a pipe.

"After they had gone a little way, the woman, half choked with tobacco-smoke from the man's pipe, leaned over and indignantly exclaimed, 'Sir, you are no gentleman!' The man took his pipe from his mouth, looked around at the woman,

and after giving her a good, long stare, remarked, 'Is that so?' He reasoned that as the smoking-car was made to smoke in, and as the woman had no business there, she could stand his tobacco. After his reasoning he placed the pipe in his mouth again and began to puff great volumes of smoke. The woman became almost speechless with rage. She stood it as long as she could, and finally her indignation got the better of her discretion. She deliberately rose from her seat, reached forward, and grabbed the pipe from the man's lips. Before he could recover from his astonishment she threw the pipe out of the window, then coolly settled back in her seat, and began caressing doggy.

"The traveling-man, as soon as he could recover from his amazement, stood up and gazed at the woman long and critically. Then he decided not to stand it, and deliberately grabbed the dog by the neck, and threw it out of the window. The woman screamed, and declared that the man was an absolute brute. In a short time the train drew into the depot at Cleveland. The woman, her eyes flashing fire and her face flushed with indignation, hurried from the smoker, and ran smack into the arms of a big man, who was evidently her husband. The traveling-man came along about the same time, and the woman pointed him out. 'That man!' she almost shrieked, in her rage, 'that man threw my dog out of the window!' The husband glared at the traveler, and then started for him.

"Sir," he exclaimed, catching hold of the traveler, 'did you throw my wife's dog through the window?'

"Sir," replied the traveling-man, shaking off the irate man's grasp, 'if that woman is your wife I certainly did throw her dog through the window.' At this the husband struck the traveler square in the face. Then they began to fight and a crowd gathered. Finally the depot-police separated them, and the crowd dispersed. The husband, however, had not received satisfaction, and in a few minutes he and the man who had insulted his wife were fighting again. It looked as if some one would be badly hurt, when some one shouted, 'Look what's coming.' Everybody looked, and what did they see?"

"Well, what did they see?" breathlessly inquired one of Townsley's auditors.

"What did they see? Why, they saw the little dog coming into the depot carrying the man's pipe in his mouth."—Indianapolis Journal.

KENNEY'S WOODS

BY R. B. BUCKHAM

WHAT did I do for amusement when I was a boy? Well, I had some pretty good times in a number of ways—playing games, hide-and-seek, duck-and-drake, pig-in-the-pen, and so on. Then, too, I kept hens, had a garden, which I cultivated myself, and made quite a little spending-money by selling what I raised. The hay-mow, where we used to jump and roll in the sweet-scented hay, and the barn-chamber, which we explored on rainy days, were both sources of pleasure, but about the best fun of all was going out to Kenney's Woods.

Not far from our home was a large pine-woods, which belonged to a man named Kenney. We regarded him as a fortunate individual, but he never seemed to care for it, and rarely went into it; but, what was better, he allowed us to do about as we pleased in it, and royal good times we had in the dim shades of the pine-trees.

First of all there was the sugar-making. On the southern edge of the woods were a number of maple-trees, and we tapped them early every spring, as soon as the snow began to melt, catching the sap in tin pails. At night the sap used to freeze over, and we would chip it from the pails and eat it. It was sweet to the taste, with just a bit of the flavor of wood to it, and we considered it delicious, I can tell you. What tasted best of all, though, was the maple-syrup which our parents made for us from the sap we brought home! Ah, there's nothing quite equal to maple-syrup made right in your own home!

Kenney's Woods was a great place for wild flowers. Arbutus bloomed early on the sunny hillsides, that were strewn with their thick coating of pine-needles; lady's-slippers grew in profusion in the soft, moist earth along the brook, and the hypaticas were abundant everywhere. "If you want any wild flowers," our parents used to say, "just ask the boys, and they'll get all you can care for." And sure enough, we knew just where to find them, and never failed to get a lot of them, without trying very hard, either.

In the fall we gathered nuts at Kenney's, and always had a good supply in readiness for Thanksgiving Day; then, too, we cut a Christmas tree there every year—a young pine or hemlock, not too tall nor too large—and dragged it home on our sleds. In the summer we fished and waded in the brook, and in the winter we skated on it.

One very warm day in August we got the idea into our heads that we must go out and camp over night in the cool depths of Kenney's Woods. We soon had our arrangements made, the hatchet sharpened, some bread and doughnuts and apples packed in a bag for

The Young People

provisions, and a sheet secured to serve as a tent. I remember that father did his best to dissuade us from going, and mother was beside herself from worrying over this new adventure; but go we would in spite of all obstacles, even though father assured us that it would surely rain before morning, as a storm was already brewing away in the southwest.

But camp out we must that night, and did. Right after dinner we set out. It was grand fun pitching camp, just as though we were to stay the rest of the summer. The afternoon passed pleasantly in the cool shade of the pines, and far into the night we sat around our camp-fire, telling stories of camp-life and adventures in the wilderness. Our hilarity was soon brought to an end, however, by the predicted rain, which began to fall first in a few drops here and there, then in a steady patter, increasing to a heavy downpour, which put out our fire, leaving us in total darkness.

It beat upon us in a fine spray through our thin tent-covering, and flowed in along the drenched ground on all sides. We were soon wet to the skin, and thoroughly chilled. To add to our discomfort the wind rose almost to a hurricane, and roared through the woods in a frightful manner, threatening every moment to carry away our shelter, poor though it was.

When morning at last dawned we hurried home in the gray light as fast as we could in our bedraggled condition, and never were lads more thankful to get under shelter than were we. Our parents mercifully spared us the added chagrin of an open reprimand, however, doubtless thinking that we had already been sufficiently punished for our wilfulness, as in fact we had. The storm lasted two whole days, and I never enjoyed anything better in all my life than those two days spent in the warm and dry security of the barn-chamber playing circus. After all, there is no place like home, especially when it rains.

ZUNI CHILDREN

It is to Mr. Frank Cushing, who lived for years among the Zuni Indians, becoming himself a member of the tribe, that we owe the beautiful picture of childhood among them.

Although for ages now the Zunis have lived a settled life, they still cling to the relic of their ancient wanderings, and every baby is fastened to the cradle-board for stated hours each day, no matter how much he may rebel. This, they say, is done that he may learn the

hardest lesson of life—that he cannot have his own way in the world, but must learn to take things as they come.

The teaching begun in the cradle is developed as the child grows. He is never whipped or hurt in any way, but parents and grandparents unite in training him for the life he is to live. His toys and plays are all prophetic of his future. When the mother bakes cakes her tiny girl bakes small cakes beside her; when the mother makes pottery she makes a little vessel for the child, and teaches her to make one for her child—her doll. Hear her quaint advice:

"Little man," to the child who has eaten too much, "when you ate this morning you did not lay your left hand across your stomach to keep the food from coming too high! Do you think any boy who eats with both hands instead of laying one across his stomach will ever know when to stop?"

"Look at the bow and quiver on the wall," says the old warrior, "and at the beads on my wristlet that mark the bad men I have slain! Yet here I sit unharmed, with the snow of many winters in my hair. It is because I obeyed when my grandfather told me, 'Run early to the river and brighten your eyes with water, that they may keep bright and wakeful to see first the cunning, swift creatures for food, or the lurking foe that makes tears!' Hast thou been to the river this morning?"—Youth's Companion.

ON GRANDPA'S FARM

Oh, don't you know the fun on the farm? For grandpa says, "Let 'em; it ain't no harm!" An' Cousin Rob leads us, and cries, "Here goes!" An' mama—she just says, "Such clothes!"

We've Crusoe's island an' robbers' cave, An' Tower of London, an' don't you know When one of us wants to let on he's brave He crawls under the sawmill, scared an' slow?

Oh, you don't know half the fun out there! For grandpa he never tells us, "Take care!" An' Cousin Rob laughs, an' says to carouse, An' mama, you see, is off in the house.

We fish in the brooks an' play in the sands, An' try to catch tadpoles out of the springs; We hide in the bushes like Injun bands, An' fight with the hornets an' get their stings.

Oh, there's plenty of fun on grandpa's place! For grandpa—he says, "Now scoot on a race!" An' Cousin Rob grins, an' says, "There she blows!" An' mama she only just says, "Such clothes!"

—Our Little Folks' Magazine.

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SEE NEXT PAGE

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For misses, boys, girls or children, give both BREAST measure in inches and age in years. Order patterns by their numbers.

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No. 4172.—TUCKED SHIRT- WAIST. 10 cents. Sizes, 32 to 40 inches bust.
No. 4164.—GIRLS' APRON. 10 cents. Sizes, 4 to 12 years.



No. 4050.—BOYS' BLOUSE. 10 cents. Sizes, 2, 4 and 6 years.

No. 4162.—MISSSES' WAIST. 10 cents. Sizes, 12 to 16 years.
No. 4168.—FANCY BLOUSE. 10 cents. Sizes, 32 to 40 inches bust.



No. 4128.—SHIRRED WAIST. 10 cents. Sizes, 32 to 36 inches bust.
No. 4101.—SHIRRED SKIRT. 11 cents. Sizes, 20 to 26 inches waist.
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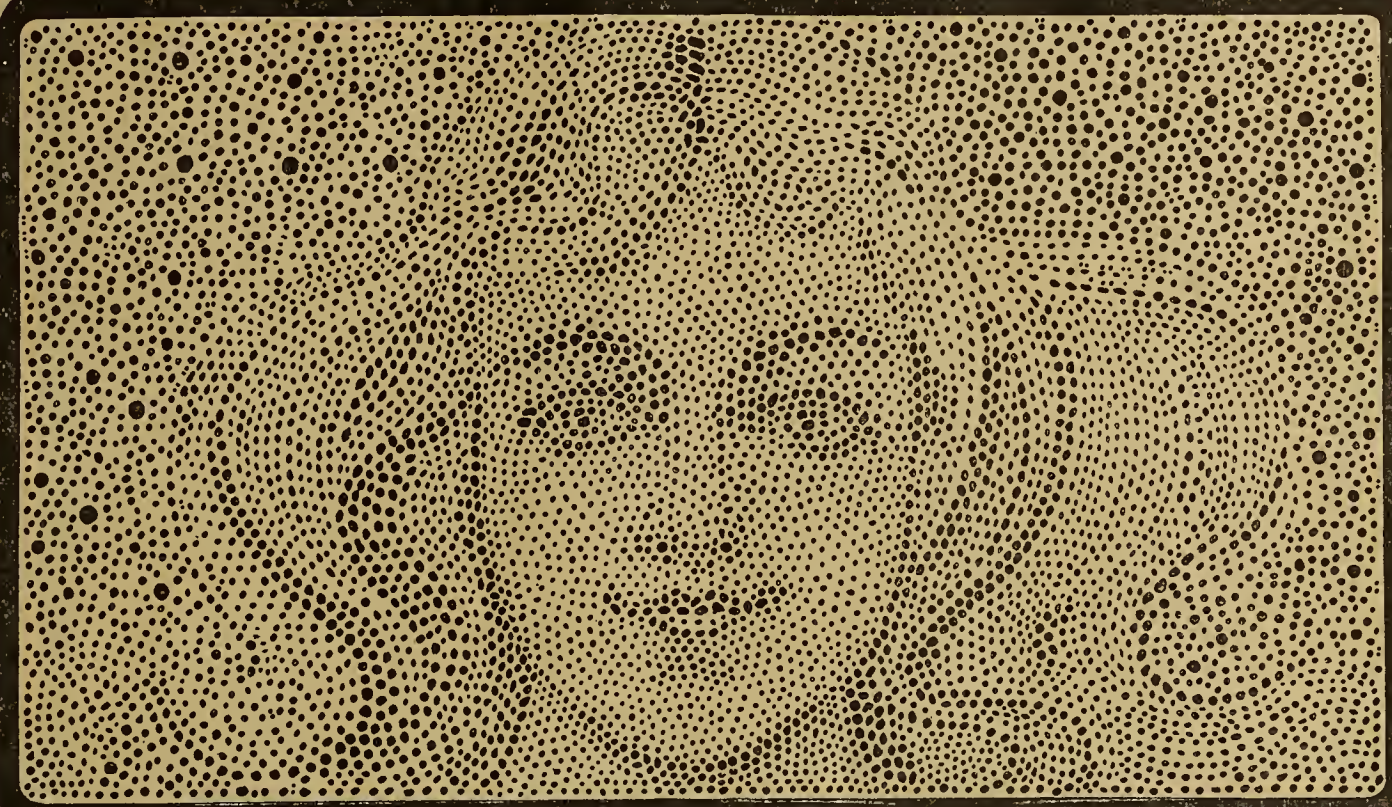
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The count is absolutely free. Every cent paid is applied on your subscription. You can count as many times as you want. Send 35 cents with each count. Each count will then be registered, and you will receive a full year's subscription to the FARM AND FIRESIDE for every 35 cents you send in.

Use any method you wish in counting the dots. Exercise your ingenuity, and devise some means of insuring correctness in your count. One way of counting is to go over all the dots in a part of the diagram and then estimate the rest. But the best way is to count all of them.

What Is Your Time Worth? WHY NOT MAKE IT WORTH A HUNDRED DOLLARS AN HOUR BY WINNING THE FIRST PRIZE IN THIS GREAT CONTEST OFFER?

This magnificent offer is made for the exclusive benefit of the readers of the FARM AND FIRESIDE. The contest is new, and was gotten up to test the skill of our readers, and to give them profitable amusement and entertainment during the summer, as it will end in August. Send your count at once, and so make sure of being included in the list of contestants for these cash prizes.

The more counts you send in the greater your chance of winning one of the big cash prizes. Count the dots half a dozen times, and you will be almost sure to send in the correct answer.

This is a splendid opportunity to win a great cash prize as the reward of only a little perseverance and care. The exact number of the dots can be counted by any one at the price of a little time.

The prizes are so great that you have a big chance of winning hundreds of dollars for the short time it takes to count the dots.

If two or more give the correct count the grand prize will be divided, and the same method will be adopted in awarding the other prizes.

Even if your answer is not correct you may get a prize, because the money goes to those who send in the correct or nearest correct counts. We do not care who wins the prizes. They are yours if you have the skill and perseverance.

No one employed by or connected in any way with the FARM AND FIRESIDE, nor any resident of Springfield, Ohio, or its suburbs, will be allowed to enter the contest.

If possible, use the subscription blank printed on this page; or, if desired, a sheet of paper may be used the same size as the blank printed on this page.

Use This Coupon, if Possible, or Cut a Piece of Paper Same Size as This Coupon

Cut along this line

FARM AND FIRESIDE
Springfield, Ohio

Inclosed find
(Amount of money)

to pay for subscription
(State whether one or three years)

to the Farm and Fireside.

Name

Post-office

County..... State.....

Are you a new or old subscriber?
(Write "New" or "Old")

My count (or counts) of the dots is:

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ADDRESS FARM AND FIRESIDE, SPRINGFIELD, OHIO

Farm Selections

NEWS-NOTES

IT IS reported that over one million laborers in Germany have petitioned the government not to increase the duty on grain and other food products that are imported.

St. Louis as a distributing-point for early and late potatoes is by far the largest in the United States. The early potato crop of the South, which arrives in solid train-loads at St. Louis, is distributed to other large markets.

According to the recent United States census, Iowa leads all other states in the number of chickens, guinea-fowls and ducks, while Illinois is second on the list. Kentucky has the greatest number of geese, and Missouri the next greatest. Texas leads off with the greatest number of turkeys.

The following timely and suggestive advice appears in the "Fruit World:" "Thin your apricots, peaches and plums while they are small. Save the tree from the labor of making pits—the hardest work it has to do—just to be dropped to the ground." As a rule three to five inches is about the right distance.

The population of France is now about forty millions. It is a wheat-growing country, and there are proportionately more bread-eaters in it than in any other European country. Notwithstanding this fact, there are no less than six million inhabitants who never use wheat bread, but live on rye, buckwheat, maize, chestnuts, etc.

The price obtained for eggs varies less than of any other farm product. This has been the case during the last twenty years, and is likely to be indefinitely continued. Fresh eggs are always in demand, and the hen that lays is the one that pays. The hen is becoming hardly second to the cow in point of importance as a sure source of profit on the farm.


The Farmers' Coöperative Company, Bethalto, Ill., owns a wheat-elevator, and carries on a "farmers' supply business." The success of this company is about to lead to the formation of a similar organization at Alton. The grange organization is second to no other for furthering successful coöperative enterprises in the interests of farmers.

The value of an acre of an orchard of ten-year-old apple-trees of the Yellow Bellflower and Newtown Pippin varieties, in the Pajaro Valley in Santa Cruz County, Cal., ranges from eight hundred dollars to one thousand dollars an acre. The Newtown Pippins are mostly grown for export to Europe, but the Bellflowers are mainly marketed east of the Rocky Mountains.

The forestry question is rapidly becoming one of supreme importance. At the last annual meeting of the American Forestry Association, which was held in Washington, D. C., the following officers were elected: Hon. James Wilson, Secretary of Agriculture, president; Dr. B. F. Fernow, Albany, N. Y., vice-president; F. H. Newell, Washington, D. C., corresponding secretary, and George P. Whittlesey, of the same city, recording secretary and treasurer.

A foreign journal of agriculture claims that the largest incubator in the world is the one in Australia. It is built on the hothouse principle, and has a capacity of eleven thousand four hundred and forty ducks' eggs or fourteen thousand eight hundred hens' eggs. The egg-trays each hold one hundred and thirty ducks' or one hundred and sixty hens' eggs. Heat is supplied by means of steam-pipes. From seventy to eighty per cent of the eggs usually hatch out.

Five Hundred Dollars will not make you wealthy, but for all that it is a handy sum to own. The opportunity is now open to YOU. There are 207 cash prizes, amounting to \$1,500.00. See page 19 and count now.



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Why not buy goods at wholesale prices, and save from 15 to 40 per cent on everything you use? You can be your own dealer if you wish, and buy your goods direct from the manufacturer with only one small profit added to the manufacturers' cost, and what is better, our \$2,500,000.00 stock gives you a chance to select goods according to your own ideas. Our stock consists of everything for everybody, in all styles and at all prices, and all qualities except trash. We will not sell trash at any price.

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WONDERFUL RESULTS.

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THOMAS E. JONES.

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International Stock Food Co., MINNEAPOLIS, U. S. A.

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For full particulars see Page 19 of this paper.

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Always name your post-office.

COMMENT

Admiral Dewey knows Don Emilio Aguinaldo too well to call him a second George Washington. Before the Senate committee he testified, "I believe he was there for gain, for loot, for money; and I further believe that independence never entered his head."

The Census of 1900 surpassed all former ones in the shorter time required for the tabulation and publication of the returns. The act of Congress establishing a permanent bureau went into effect last month, and it is expected that in the future there will be even greater expedition and greater economy in the work of census-taking.

For the fiscal year ended June 30, 1902, the government receipts were, in round numbers, \$560,000,000, and the expenses \$470,000,000, leaving a surplus of \$90,000,000. Speaking of the Treasury's good year, Walter Wellman says:

"Notwithstanding the reduction of the war-taxes made by the last Congress, the total receipts of the government during the year just closed have been only \$20,000,000 less than during the preceding year. Internal revenue receipts fell from \$304,000,000 to \$271,000,000, but customs receipts increased from \$238,000,000 to \$255,000,000.

"The expenditures of the government have materially decreased. They were \$508,000,000 last year. This year's total will show about \$471,000,000, a decrease of \$37,000,000.

"Uncle Sam has taken in money at the average rate of \$1,800,000 a business day during the last year, and he has paid it out at the average rate of \$1,500,000 a day. Three hundred thousand dollars profit for each business day is not so slow.

AFFAIRS OF NOTE AND MEN OF MARK

"It is noteworthy that pensions still constitute the heaviest item of government expenditure—nearly \$450,000 a day.

"That the United States is in first-class financial condition may be judged from the fact that there is now on hand an available cash balance—money subject to appropriation—of \$206,000,000. All told the government has on hand the enormous sum of \$1,119,000,000, of which \$497,000,000 is in gold, probably the largest gold hoard held by any nation in the world. Uncle Sam has \$835,000,000 in trust funds for the redemption of outstanding notes and certificates, \$162,000,000 in his 'general fund,' and \$127,000,000 deposited in national banks."

WORK OF THE ARMY IN THE PHILIPPINES

A general order issued July 4th from the War Department reads, in part, as follows:

"The President thanks the officers and enlisted men of the army in the Philippines, both regulars and volunteers, for the courage and fortitude, the indomitable spirit and loyal devotion with which they have put down and ended the great insurrection which has raged throughout the archipelago against the lawful sovereignty and just authority of the United States. The task was peculiarly difficult and trying. They were required at first to overcome organized resistance of superior numbers, well equipped with modern arms of precision, intrenched in an unknown country of mountain defiles, jungles and swamps, apparently capable of interminable defense and of being well fortified.

"When this resistance had been overcome they were required to crush out a general system of guerrilla warfare, conducted among a people speaking unknown tongues, from whom it was almost impossible to obtain the information necessary for successful pursuit or to guard against surprise and ambushes. The enemies by whom they were surrounded were regardless of all obligations of good faith and of all limitations which humanity has imposed upon civilized warfare.

"Under adverse circumstances the army of the Philippines has accomplished its task rapidly and completely. In more than two thousand combats, great and small, within three years it has exhibited unvarying courage and resolution. Utilizing the lessons of the Indian wars it has relentlessly followed the guerrilla bands to their fastnesses in mountain and jungle and crushed them.

"It has put an end to the vast system of intimidation and secret assassination by which the peaceful natives were prevented from taking a genuine part in government under American authority. It has captured or forced to surrender substantially all the leaders of the insurrection. It has submitted to no discouragement and halted at no obstacle. Its officers have shown high qualities of command, and its men have shown devotion and discipline. Its splendid, virile energy has been accompanied by self-control, patience and magnanimity. With surprisingly few individual exceptions its course has been characterized by humanity and kindness to the prisoner and the non-combatant.

"With admirable temper, sympathy and loyalty to American ideals, its commanding generals have joined with the civilian agents of the government in healing the wounds of war and assuring to the people of the Philippines the blessings of peace and prosperity. Individual liberty, protection of personal rights, civil order, public instruction and religious freedom have followed its footsteps. It has added honor to the flag which it defended, and has justified increased confidence in the future of the American people, whose soldiers do not shrink from labor or death, yet love liberty and peace.

"The President feels that he expresses the sentiments of all the loyal people of the United States in doing honor to the whole army, which has joined in the performance and shares in the credit of these honorable services."

Michael Henry Herbert, the newly appointed successor of Lord Pauncefoot as Ambassador of Great Britain to the United States, was born in 1857. He entered the diplomatic service of his country in 1877, immediately after completing his education, went to Paris as attaché in 1879, and was made second secretary in 1883. In 1888 he was transferred to Washington and acted as charge d'affaires after the dismissal of Lord Sackville West, and in 1892 became secretary of the legation. He was transferred to The Hague in 1893. In 1894 he was transferred to Constantinople, and acted as charge d'affaires at the time of the Armenian massacres. In 1897 he was transferred to Paris as secretary, with the rank of minister plenipotentiary. The new ambassador has an American wife, having married, in 1888, Miss Leila Wilson, of New York.

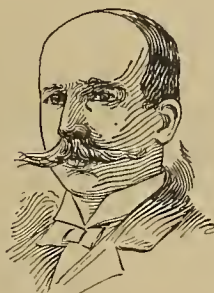


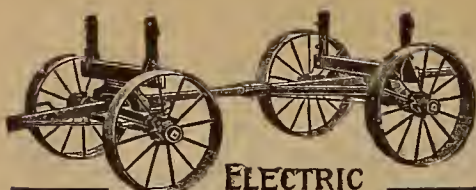
The nomination by the President, with its prompt confirmation by the Senate, of Captain Charles E. Clark to be advanced seven numbers and to be a rear-admiral certainly meets with the unanimous approval of his countrymen. They remember with pride his brilliant and unparalleled achievement of bringing his battleship on a long and arduous voyage around from the Pacific in perfect trim and ready for instant action when she joined the fleet in Cuban waters, and the wonderful work done by the "Oregon" in the battle of Santiago. Of the "Oregon's" fifty-mile chase of the "Colon" the commander-in-chief in his official report says, "This performance adds to the already brilliant record of this fine battleship, and speaks highly of the skill and care with which her admirable efficiency has been maintained during a service unprecedented in the history of vessels of her class." The place of Admiral Clark in history is secure for all time. He has fully merited every honor received.

The announcement in "Facts and Comments," just from the pen of Herbert Spencer, that it is his last book, and that he has written all that he has to say to the world, reminds the world of how much he has already said to it. This famous philosopher-scientist, born in 1820, has for more than fifty years past been producing books, giving in the main the results of his attempt to work out a complete system of philosophy in harmony with modern science. Beginning with the first principles of all knowledge, he has aimed to "Trace how the law of evolution was gradually realized in life, mind, society and morality."



All who have watched the development of the beet-sugar industry in the United States are familiar with the name of Henry Thomas Oxnard. Recent events have made him more widely known than ever before. The struggle over the Cuban Reciprocity Measure found him in the thick of the fight as the leader of the beet-sugar men, and he proved more than a match for the big men of the sugar-refining trust. Mr. Oxnard was born in 1860 at Marseilles, France, of American parents, was educated in Massachusetts, and now lives at Oxnard, California.





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We bought at Receiver's Sale 20,000 rolls "Eagle" Brand Roofing. Made of two sheets saturated felt, between sheets waterproof cement making a solid, flexible sheet, it can be put on without removing the old roof. Can be applied without previous experience, requiring no special tools. Each roll contains 108 square feet. Price complete with cement for two coats, naps and nails to lay, per roll, \$1.05. Also a few rolls, 3 ply, per roll, \$1.25. Ask for Catalogue No. 34. **CHICAGO HOUSE WRECKING CO., W. 35th and Iron Sts., Chicago**

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Located in northeastern Ohio. Write for new printed list just out, giving full descriptions and prices. **E. H. KISTLER, Farm Agent, WARREN, OHIO**

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Mr. Greiner Says:

THE OUTLOOK.—For this vicinity at least I notice a greatly increased demand for fruits and vegetables and a willingness to pay increased prices. We look for a continuation of this demand right through to the end of the season, and the only question in our minds is that of the size of the supply.

FOR TREE-FRUIT.—Almost all tree-fruits around here appear promising at this time. Apples, pears, plums, etc., are quite well loaded on the trees. Reports from some other places, however, are not so favorable, and growers talk about a probable two dollars a barrel for the apple crop. Cannons are paying four cents a pound for sour cherries.

DEATH TO CATERPILLARS.—Caterpillar nests, or tents, are yet allowed to disfigure many of our fruit-trees. We who spray with Bordeaux mixture and arsenites have no trouble from leaf-eaters on apple and pear trees. A reader, I. D., of Shippensburg, Pa., says he saturates a woolen cloth with black machine (lubricating) oil, fastens it to the end of a long pole, and stirs it in and through every caterpillar's nest he can find, selecting for this job the early morning hours, when the caterpillars are at home. It makes short work of them. Wild cherry-trees are their favorite breeding-places, and should be cut out of all the fence-rows.

FODDER CROPS.—The hay crop is surely a very short one this year, with little old hay left over. We will have to be very saving with all our fodder resources, and try in every way possible to find substitutes for hay. I have had no experience with the Southern cow-pea as a hay crop, although it is frequently recommended for that purpose, but I am going to try it. I still have more faith in the soy-bean as a protein crop for Northern farmers than in the cow-pea, and give evidence of this faith by having planted several acres of the earlier soy varieties, mostly for the grain, and only experimentally for green feeding and hay. The soy-bean I believe is to have a great boom for general cultivation, and I hope it will relieve us of the necessity of buying and feeding so much wheat bran. Some of these early soy-beans contain more protein (up to forty-one per cent) than does oil-meal. The plant of either the soy-bean or cow-pea gives a well-balanced food. The grain serves even better than bran to balance the excess of carbohydrates in straw, timothy hay, corn fodder or corn. For green feeding and hay I am making a new experiment by planting a mixture of soy-beans and cow-peas. The seed mixture, about half and half, is drilled rather thickly in rows a foot apart. The upright-growing soy-beans I hope will furnish support for the cow-peas, and keep them off the ground, so as to make it more easy to cut the crop with the mower.

SPRAYING POTATOES.—In the directions which accompany the packages of "Boxal," a ready-made preparation for spraying potatoes, the time for the first spraying is given about as follows—"when the bugs are getting to be at all numerous." I find that when I wait until the bugs are numerous the potatoes are already damaged almost beyond repair. The great enemy which I fear more than the potato-beetle and slug is the little, insignificant flea-beetle. It makes its appearance in countless numbers when the plants are yet very small, and when I give them a chance, the entire foliage will soon appear as if perforated with little holes over the whole surface. These tiny openings are open doors for the entrance of blights, and the latter, especially the so-called "early blight," seldom fail to take advantage of the situation. Our very first aim in growing potatoes should be to keep these tiny pests away. They do not like our ordinary mixtures for spraying, and if Bordeaux is applied early enough the injury caused by flea-beetles may be greatly prevented or reduced, while the application at the same time tends to keep blights from getting a foothold. The arsenite had better be combined with the Bordeaux mixture even for an early spraying, and before many potato-beetles appear on the vines. The very first slugs when hatching from the eggs should find the foliage already flavored with poison, so as to be quickly disposed of before they have much chance to lacerate the leaves. I am not stingy with the application, either. Thoroughness pays.

GINSENG-GROWING.—The people who grow ginseng, ginseng plants and seeds send out circulars all over the country, in which they promise a rich harvest to those who will at once take hold of the business. It is hardly a matter for doubt that ginseng, ginseng plants and seeds can be grown at a good profit. Whoever is led to think that he can grow the crop as easily as carrots or beets, or in any ordinary garden-soil in open air and full exposure, will soon find on trial that he has made a woeful mistake. These people estimate the value of an acre of ginseng planted in proper and promising manner to be upward of forty thousand dollars, and I do not doubt their figures in this respect; but it will cost a good share of this amount to get the crop in bearing condition. Ginseng in its natural state is found in the shade of forests, where it thrives on high and well-drained land, or wherever there is an open spot giving half shade. It does not, and will not, succeed where it has a full exposure to the sun's rays. It will not thrive in any soil that is not abundantly supplied with humus, and mulched besides. Any attempt to grow it under the ordinary conditions favorable to the culture of ordinary garden crops, even the most exacting-like celery, must result in failure. If you are not willing to provide a new, humus-filled, well-drained loam, set a framework holding a screen-roof, which furnishes half shade, and give the plants the highest cultivation and plenty of mulch, you will save expense and disappointment by letting ginseng alone.

Mr. Grundy Says:

IT PAYS TO EXPERIMENT in a limited way with new things. It is the spice of farming, adds interest, and sometimes results profitably. One should not be carried away by a single success, nor be discouraged by a single failure. If a friend finds a forage-plant that yields an immense crop on his farm we should not jump to the conclusion that it will do the same for us, and devote a whole field to it. It would be safer to test it on a small scale two or three years before planting largely of it. It may be a good thing to grow for certain uses, but worthless for others—the very ones for which we would need it. It may prove to be quite a profitable crop for Smith, who keeps large numbers of hogs, but worthless for Brown, who raises sheep chiefly.

RAPE.—For instance, there is rape. Scores of writers have lauded it to the skies as a forage-plant. To read some of the articles about it one would think it is the one thing he needs to make him wealthy, but experience will teach him otherwise. Rape is an excellent forage-plant, but its uses are limited. It is a good green food for sheep, and may be pastured by them; hogs eat it greedily after they acquire a taste for it; cattle are fond of it, and there is no better green food for penned-up poultry. It is a hardy crop to grow in odd corners and spots where other crops have failed. It grows rapidly, will smother out the noxious weeds and furnish lots of green food. A garden overgrown with rape looks vastly better than one overgrown with weeds, and is much easier to work and keep clean the following season. It is a good idea to have a little sackful of rape-seed hanging in some convenient place, and whenever a little spot is cleared or left vacant a handful can be scattered on it and quickly raked in. The birds took quite a lot of my last planting of sweet-corn, and as it is rather thin on the ground I sowed rape among it June 20th, and will get quite as much cow-feed off the ground as I would if there had been a good stand of corn. The rape will not check the growth of the corn to any appreciable extent, while the corn is thin enough to give the rape a fair show. I consider rape about the best "fill-up" or "catch" crop one can plant, but I would not plow up a field of clover to sow it, nor sow it where I could grow sweet-corn. It is harder than most of our quick-growing forage-plants, will stand as much frost as cabbage, and therefore may be sown as late as September. It cannot be made into hay, neither does it make good silage.

POTATOES.—South of latitude forty it is a difficult matter to grow the late, or even the medium-late, potatoes. We have found that we cannot be sure of a crop oftener than one year in five. Early potatoes are our chief reliance, the Early Ohio and Acme being our staple varieties. These varieties are made before the killing hot weather of mid-summer sets in. After they have grown the problem is to keep them until winter. If the season is fairly dry we have the best success by leaving them in the ground where they grew until cool weather comes, then digging, and storing them in a dry, dark room until November, when they are put in the cellar. After the tops die a heavy growth of grass and weeds spring up, which must be mowed to prevent them from going to seed. Then the ground is so full of roots that digging the crop is a difficult job. If the tubers are dug when ripe, and stored in a cellar, many of them rot before winter, and the eating-qualities of all the rest are impaired. We must either leave them in the ground and keep the grass and weeds cut down or dig and store them in a dark, cool room. If the latter plan is adopted we must look them over about every ten days and remove the rotten ones or they will all rot. This is quite a task, but we get the use of the land on which they grew for rape, sweet-corn or turnips. If we could get our winter supply of potatoes from the North at reasonable prices it would pay to do so, because they are of better quality than those we manage to keep, and they keep later in the spring. Very few farmers, however, care to pay cash for what they can grow, even if the quality is a little better.

HAY.—Haying-time is at hand, and the crop seems to be a very fair one, judging from the crop reports of the government. Locally it is excellent, and by the use of the improved haying implements will be gotten up rapidly. Haying-time has been shorn of most of its terrors by the mower, loader and horse-fork. To-day we see a forty-acre field of waving grass. Three or four days pass and it is in the barn. I feel quite satisfied that before many years the area devoted to hay, especially timothy hay, will be cut down one half or more. The new storage-battery just invented by Edison is certain to cut the demand for horses for city use as much or more than the trolley did. Electric machinery may not come into use on the farm for some years yet, but it will come in time. If through the employment of some other power farmers are enabled to dispense with half the number of horses they are now obliged to keep and feed, thousands of acres will be released from hay-growing and can be devoted to the growing of food for mankind. If electric power is used for driving light carriages and heavy trucks to the extent that Mr. Edison thinks it will be the demand for horse-feed in the cities will go down to almost nothing. I rather think the farmer will not worry over the situation. He will hail the day when his horse-feed bill will be lessened one half or more. The horse-feed bill of the farmer is a large one—much larger than many are willing to admit. A large acreage of his land and weeks of his time are every year devoted to producing horse-feed in which there is no profit. If this great expense could be eliminated it would be a great relief to the farmer. Truly we are on the eve of great advances in agriculture and vast changes in the economies of life.

All Over the Farm

GROWING TIMBER

APPPEALS to farmers to grow timber on the thin hillsides of our Eastern states for climatic effects or for other such vague reasons are valueless and ineffective. We have a living to make in this world, and immediate income is essential. A wagon-load of glittering generalities are not going to weigh much with the man who knows that his first business is to provide money for the expenses of this year, and the next, and the next. The more rough and thin land he owns, the greater is the problem. It is easy for the scientist to say to him that his land should not be under cultivation—should never have been cleared—and should be growing timber. The statement is doubtless true, but the land has been cleared, the capital of the owner is invested in it, and a living for the family must be made. The growing of timber in our country will be undertaken in an appreciable degree only when the owners of rough land can be shown that their annual income will not decrease in amount, and that their property will appreciate in value, by devoting a part of their holdings to tree-growing. I believe that this time has come for portions of the rough land in the territory drained by the tributaries of the Ohio River. Lumber is going up in price, and soil-fertility is going down the streams. There is an unreasonably large area that is not yielding one cent of clear profit to its owners, and the problem before each individual owner to-day is to determine what area will not pay an actual profit under cultivation or in pasture, and to get trees of the most profitable varieties started, so that their farms will be growing in value.

UNPROFITABLE LAND.—Some very steep and rough land in the unglaciated portions of our country are not unprofitable to its owners. This is true chiefly of the limestone sections, where the toughness of the soil and the adaptability to pasture-grasses combine to prevent washing. Such land provides a choice grazing-ground for light animals, thus yielding an annual profit to the owners. Other land may be less broken, but yet profitless, because the soil will not hold a stand of grass, and lacks strength for plowed crops even if plowing was practicable. This is characteristic of much land on hillsides, the prevailing rock of which is sandstone. Hundreds of thousands of acres are plowed each year simply because a stand of grass cannot be gotten or kept, and the cultivation is given without expectation of a satisfactory crop, but with the hope that a seeding to grass may be secured. Dashing rains carry the remnant of soil into the brooks, and conditions grow worse. I do not wish it understood that this state of affairs prevails as a rule outside of the limestone belts in this broken country; but the percentage of land in such condition is unpleasantly large, and is increasing every year. Here is the chance for the friends of forestry. There should be some practical demonstration of the profits from tree-growing, and the farmers should be advised in respect to varieties to grow and the general care to be given. As a business proposition they should cut out of their cultivated lands all areas that do not pay their way in pasture or under the plow, and devote them to tree-growing. This would not mean any reduction of the yearly income, and it would mean enhanced value of their farms.

CARE OF PASTURE-LAND.—It is a rather nice question to decide what land should be abandoned for pasturage, and what land should be nursed along and cared for, but it is certainly poor policy to drift along on half-way ground, keeping some stock on land, and yet allowing briars and worthless bushes to encroach on the little grass that sticks to the soil. If the land is worth pasturing, a fight should be made to control the growth of wild stuff on it; if that is unprofitable, then the stock should be kept off and an effort made to foster the growth of such kinds of timber as will add value to the farm. Much is yet to be learned along this latter line, and our experiment stations should take hold of the work and become capable teachers of those owning this nearly valueless property.

If the soil of these rough lands will produce a profitable amount of grass for stock it is a waste of time to advocate timber-growing for them. The grass is the thing where it will grow. Where sheep are not kept, bushes and briars give trouble, and the only thing to do is to go after them with the scythe and hoe. A droughty time in July or early August makes cutting most effective. Where there are bluffs it often pays to set some locust-trees if they do not come without planting. Blue-grass will spread under locusts, and the trees soon grow into marketable stuff. The remainder of the field should be made clean if it is to be kept as a pasture. Two cuttings in the summer, given faithfully for a few years, will kill most bushes. Thin spots can be harrowed in May, and seeded with cow-peas, which will furnish pasturage while helping the soil. Such spots should be seeded to grass in September.

DRAWING THE LINE.—In the sections of which I write it is time for many a farmer to draw the line between his profitable and unprofitable land. Where fields are unfit for the plow, and cannot be made to keep a sod of grass, a crop of the right kinds of trees should be started, either by some planting of seeds or usually only by some cutting out of undesirable kinds. An effort should be made to subdue thoroughly the land that can be kept in grass, either by such stock as sheep and goats, or on small farms by the scythe and hoe. The intractable land should have its desirable undergrowth protected by keeping stock off it and by cutting out the less desirable varieties of young stuff. The half-way course means little feed, less soil and small income, with constant decrease in the valuation of the farm. Concentra-

tion of effort on the fields really fitted for tillage and permanent pasture and some attention to tree-growing on the other land would probably add to immediate income, but would surely add to the value of one's investment. The sooner a considerable percentage of the very broken lands of our Eastern states is resigned to the production of timber, the better will it be for owners who now see the soil on steep hillsides washed away by dashing rains.

DAVID.

SHALL WE PLOW DEEP?

Nine times out of ten the first answer we would get to this question would be, "Yes; of course we should plow deep." In pursuance of this theory we have had made for us subsoil-plows that dig into the earth as far again in most cases as the common plow could reach. Our leading agricultural writers have taught deep plowing as a cardinal principle of farming; even that exponent of homely farm philosophy we all love to quote, Benjamin Franklin, once said, "Plow deep, while sluggards sleep, and you will have corn to sell and keep."

In theory this all sounds fine, but what are the facts? I shall speak for the whole Eastern country and I believe for a great portion of the West when I say that the deep-plowing theory is wrong in principle and in practice. What does the plow bring up when it goes down more than six or eight inches into the ground? With most of us it turns up a hard, cold, unpromising-looking soil, capable of producing little in the way of good crops. When this earth is analyzed it is not found to contain the elements needed to grow the grains we want for the sustenance of our stock or our families.

The fact is, after we get down a certain distance we reach a point where there is little or no humus. That is deposited on and near the surface. The depth we must go to find this point will of course vary somewhat with the locality. In some parts of the country there is a deeper deposit of fallen leaves, decayed vegetable matter and rotted timber than in others. We must be our own judges when we have sent the plow down deep enough to bring up this rich material, and then it is the part of wisdom to stop.

Another fact is that it costs more than that to which it comes to get the subsoil to the top. It costs more in the strength of our horses, and more outlay of muscle in ourselves.

Finally, we have few plants which need to go down more than the six or eight inches through which the natural humus of our farms extends. Alfalfa, perhaps, seeks the very bottom, but it is not so much fertility that it is after as moisture. Corn does not sink its roots more than five or six inches. If it finds the fertility it desires within the bounds of those few inches that is all that is necessary.

But the native fertility of our soils is exhausted, you say, and we must seek it somewhere else. That is true; but it is wiser to supply the needed fertility in other ways than by deep plowing. Good barn-yard manure, legumes and thorough culture will make up the losses far better than the plow can do by seeking lower levels.

E. L. VINCENT.

DROUGHT-RESISTANCE

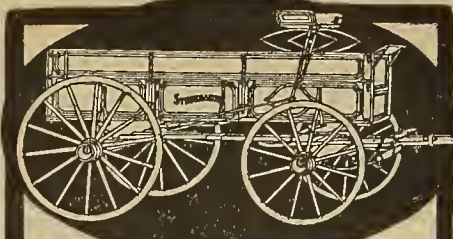
It is seldom that the most serious drought can prevent fairly profitable crops in any locality blessed with a generous rain or snowfall during the winter season if the soil has been previously prepared to receive the moisture and is given proper treatment in the early spring and continued through the growing of the crop.

The first requirement for drought-resistance is storage capacity for moisture in the subsoil. A subsoiler attachment following in the furrow behind the plow, or, what is still more effective, a separate subsoiling-plow running to the depth of six or eight inches below the bottom of the surface furrow, will afford water-storage for thousands of barrels an acre, and often result in bountiful crops where only failure could otherwise be expected. It is also very easy to understand how the breaking-up and aerating of the subsoil, together with the disintegrating effects of water, frost and the chemical action resulting, must gradually bring large amounts of fertility within reach of crops which were before out of reach and unavailable.

After storage capacity for moisture has been provided the next most important drought-resisting requirement is the prevention of the escape of moisture by evaporation. But a very few of those intensely drying, windy days frequent in early spring, which suck the water from freshly plowed or bare, untilled soil like a sponge, are required to ruin all chance for a profitable crop when followed by a droughty season. If the soil had received proper tillage and attention at the critical time the crop could have matured in defiance of the drought by means of the store of moisture held in reserve below, which had been prevented from escaping by the mulch of finely pulverized surface-soil. In this connection it will be evident how important good drainage is. If no water is allowed to stand nearer the surface than ten or twelve inches it becomes possible to get the tillage under way with no loss of time waiting for surface-water to dry out of the lower portions of the fields. After such water-logged and sun-baked portions have once become dried no amount of after-tillage can restore them to a good state of tilth.

A few seasons ago the writer conducted a series of experiments in drought-resistance with corn, potatoes, peas, beans; some red and blackcap raspberries also were included in the plats treated. These experiments were made to determine what might be accomplished when the fullest precautions were undertaken to prevent the escape of moisture by evaporation. The results were surprising, although field-tillage, looking to the same end, had long been practised, but in a less intensive degree.

B. F. W. T.



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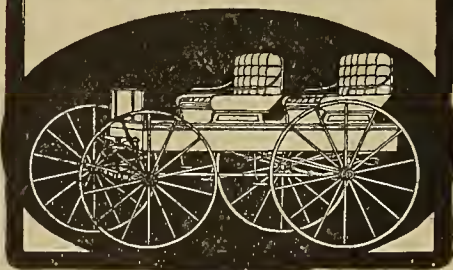
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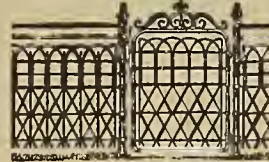
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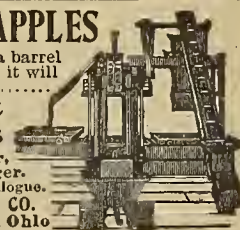
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AN EXPERIMENT station has been established at Willis, Montgomery County, Texas, for testing the culture of a superior grade of tobacco. The indications are that the culture can be successfully conducted, with unusually profitable results.

Alfalfa is no new thing, as one might infer from the amount of attention that it is now deservedly attracting. Five hundred and fifty-one years ago Mr. Wm. Turner, a husbandman of that period, wrote that a "Romish" acre of it—that is, twenty-eight thousand eight hundred square feet—would keep three horses for a year. Also, "that it might, in fair seasons, yield four cuttings, and last, without resowing, ten years." *

LET THE GIRLS STICK TO THE FARM

Farmers' daughters who leave comfortable homes to seek uncertain employment in town often make a mistake. There are few cases where the same amount of energy and industry expended at home would not bring equal returns, besides the comforts and safeguards that are retained.

Most girls could obtain the use of an acre or two of land, and on this they might produce something profitable. Eggs guaranteed strictly fresh, pure honey, fat squabs, plump and tender chickens—all these good things are desired by city people, and many of them are willing to pay a good price for articles that are always kept up to the mark in quality. The raising of these may mean some hard work, but not so hard or confining as standing all day behind a counter or sitting at a sewing-machine or type-writer.

A New Jersey woman some years ago planted one fourth of an acre of Tom Thumb cucumbers, tended them with care, and pickled them according to an old family recipe. She sold them first by a retail grocer, but when they became known she was able to sell them to the best wholesale trade, and makes a tidy sum.—The Farm Journal.

GREEN MANURING

In the prairie sections of the West where the land now in cultivation yet contains much of its virgin fertility the value of green manuring has not become sufficiently known to be fully appreciated. In sections where the growing of legumes has been introduced the fertilizing value of these plants has been attributed to their ability to appropriate the free nitrogen of the air rather than the decay of vegetable matter in their roots and tops when turned under. While this in a measure is true, and while nitrogen is one of the chief ingredients of plant-food, it is by no means the only constituent, and the addition of organic matter through decomposition in the soil, with the accompanying gases caused by the process, forms no small part in the growing of subsequent crops.

The advantages of green manuring are manifold. The cost of growing a crop for the purpose is very little above that of buying and distributing barn-yard manure, while the distribution is more uniform and the decomposition more rapid. The gases formed by the decaying vegetable matter are incorporated in the soil, and the nitrogen formed has no means of escape. The green crop when plowed under increases the capacity of the soil for holding water, and adds humus, which is much needed when the droughty season of the year causes more rapid evaporation of moisture from the soil without giving back the quantity in the shape of rains and dews. Greater yields of grain follow green manuring than the addition of organic matter in any other form. Thus, after a crop of succulent weeds or cultivated plants is turned under just previous to flowering, when the heaviest growth of foliage is obtained, large crops of corn or sorghum result. The use of the manure crop figures largely in the economy of the farm. Not only may the farmer increase the productiveness of his grain-field, but he may enlarge the area of manured ground "ad libitum," adding value to his farm and volume to his crops with the least possible expense.

The crops best suited to this use are the various leguminous plants, the most important of which are the clovers, soy-beans, cow-peas and vetches, or any succulent, luxuriant-growing plant which forms a dense growth over the entire surface of the field to be fertilized.

The addition of decaying vegetable matter to soils overcharged with alkaline substances removes and neutralizes the excess, rendering the ground arable and productive. The decay of roots in the soil fixes substances brought up from the subsoil for the immediate use of the succeeding crops, while root-penetration leaves the ground porous and in good order for future use. Everything considered, the value of green-manure crops is inestimable.

C. B. BARRETT.

SWEET-CLOVER

Those who have carefully observed the habits of the wild sweet-clover (otherwise known as Bokhara clover, or melilot) have noticed that its volunteer growth is practically confined to roadsides where the surface-soil has been scraped away or where the ground has been puddled by trampling, and to similar locations elsewhere, such as the bottoms of abandoned brick-yards or places in pasture-fields where the soil has been trampled while wet, or hillsides from which the surface-soil has been washed away. It is practically never found invading pastures or other lands which have been kept in good condition.

At the Ohio Experiment Station the seeds of this

In the Field

plant have repeatedly been sown on soils which were merely thin, but not washed or puddled, but invariably without success. The only case in which it has been induced to grow was where it was sown on the bottom of an old brick-yard at Columbus in 1888. Here a full stand and vigorous growth were obtained, and the crop was allowed to stand and reseed itself until the fall of 1891, when it was plowed under and the land sown to wheat. The result was a yield of 26.9 bushels of wheat an acre on the land where melilot had grown, against a yield of 18.6 bushels on similar land alongside, which had been cropped with corn and oats the two seasons previously.

The experiment station record reports an experiment made near Tost, Germany, in which melilot was sown with rye in the spring of 1889, and was plowed under the following spring, and the land sown to oats, followed by potatoes. The result was an increase of seventeen bushels an acre in the oats crop, and a doubling of the potato crop.

Animals do not eat sweet-clover readily, but when confined to it they are said to soon learn to relish it, and it is largely grown for forage and hay in the Southern states. It resembles alfalfa in appearance and habits of growth, and, like alfalfa, must be cut before full blossoming if it is desired to make hay of it, otherwise the stems become too hard and woody. Like alfalfa, it will furnish two or three crops of hay in a season; but it differs from alfalfa in being a biennial plant, so that it will disappear at the end of the second season after seeding unless permitted to reseed itself.

As a plant for green manuring Prof. S. M. Tracy, formerly of the Mississippi Experiment Station, says of it in Farmers' Bulletin 18 of the United States Department of Agriculture: "As a restorative crop for yellow loam and white lime lands this plant has no superior, and for black prairie-soils it has no equal. The roots are very long, penetrating the soil to a depth of three or four feet, quite large, and by their decay at the end of the second year leave the soil with innumerable minute holes, which act as drains and loosen the soil, so that the roots of other crops can go deeper and find more abundant supplies of food and bear drought better."

The appearance of sweet-clover is a signal that the soil is out of condition. Its mission seems to be to occupy the waste places and neglected spots of the earth and to prepare them for the growth of other plants.—Chas. E. Thorne, Ohio Experiment Station.

A GOOD WOMAN FARMER

Most men-folks I know seem to think they have a monopoly on farming, and are rather inclined to turn up their noses when one says anything that would indicate that a woman could by any manner of means carry on a farm successfully.

I know of a woman who not only carries on a farm, but does it successfully—more so than nine out of ten men farmers in this community. This woman was left alone in the world by the death of her husband, a hard-working Scotchman. One little boy also remained to her; but he was too small to be of any assistance to her for several years. There were close to two hundred acres in the farm, which was located in a dairy country. The problem arose as to the disposition to be made of the land when the widow said "I will carry on the farm."

This was all the more difficult from the fact that the lady was in poor health, suffering greatly at times from asthma. It meant a great deal for her to undertake such an enterprise; but whatever she lacked in strength of body was more than made up for by her superior executive ability. If she could not work herself, she could plan most effectively.

All the work was necessarily done by hired help—and very expensive help at that, many times—except that she personally did what she could about the stable-chores, thinking that this might be of service in keeping up her strength, as it probably did. All the planning was done by her. The plowing, the sowing and the planting were managed by her, and most systematically, too. One thing I have always noticed about her work—it is done on time. At just such an hour every day in winter the cows were let out and watered. Promptly at such a time they were put into the barn, and fed and milked. The sheep were looked after with the same regularity. The milk being made up at home, she attended to all the details of that work herself, turning out an article which always took the top price in the market.

By and by the little boy grew so that he could do some light work. This greatly relieved her, and she was beginning to let some of the burdens slip from her shoulders to his. He was a good, faithful boy, and never failed in any spot or place; but by one of those strange dispensations of Providence so hard to account for, when he was nearing his majority he, too, was taken away, and she was left now absolutely alone.

For a time she faltered, and it did not seem as if she would be left long to go on; but she rallied after a while, and took up the burden again. To-day she is carrying on the old farm just as successfully as ever. She has enlarged her dairy somewhat, and no one in all that neighborhood has better cows. Her calves

are never poor, and if the dealers want to find good sheep or lambs they know she will have them if any one will. The demand for her butter always exceeds the supply, and she has no difficulty in disposing of all her surplus hay, grain and potatoes.

The success of this woman, with her frail body, is a rebuke to many men of the part of the country in which she lives, who are constantly complaining that they cannot make a living. I have no doubt, however, that her example has done more toward inspiring the farmers about her than any other one thing. Men do not like to have a woman out-strip them. The features which have contributed to her success can be easily recognized. She has no patent on them. Every one of us may be prompt, thorough and thoughtful about our work, and these things under ordinary circumstances do not fail to bring success. E. L. VINCENT.

THE GRASSES OF THE WESTERN RANGES

The principal grasses of the Western ranges are the buffalo-grass, grama-grass and Western blue-stem. There are other grasses, but they do not enter materially into the general forage of the plains. Of the larger shrubs and plants of the plains the sage-bush, greasewood, soapweed and cactus make up the principal varieties. There is also a great variety of wild, flowering plants that bloom profusely in season, and give the plains a very bright and lively appearance. The buffalo-grass is a very fine, short grass, which never grows to a greater height than three or four inches, and even the stems that reach this height are the seed-stems. The grama-grass is often called buffalo-grass because of the resemblance of the heads to that grass. It is a grass of much larger growth than the buffalo-grass, and on irrigated uplands it sometimes attains a height of two feet. On its native heath it grows to the height of from five to six inches. The Western blue-grass is the one that gives the Western plains their characteristic color during the season of green grasses. It is sometimes called "wheat-grass," for the reason that it has a head resembling the head of the wheat. Grama-grass is the most common of the three grasses.

The grasses named are exceedingly nutritious. Any one of them is worth two or three times as much as common timothy for either grazing or for forage. Cattle are often fattened for market on them, both from feeding on the range or from hay in the stall. They are almost equal to corn in fattening qualities. There is a great difference in the quality of ranges. Some are rocky and gravelly, and the feed is very thin. Others are thickly carpeted with these nutritious grasses. This condition is brought about both by the better quality of the soil and a more copious rainfall. The cattlemen like a cool, wet spring and a hot summer—conditions that produce a good growth of grass, and its early maturity. They do not like to see the grass come on late, for the reason that there is danger of it being frost-bitten before it cures. Frost-bitten grasses lose a large part of their nutritiousness. In ordinary seasons the plains remain green until about midsummer, when the grass begins to cure and turn brown, which color it retains for the rest of the year.

The Western ranges have greatly deteriorated of late years. The choice parts have not only been lost by occupation by the farmer, but those that remain have been injured by overstocking. Ranges that are not overstocked will reseed themselves year by year. This is something that the cattlemen have almost wholly overlooked. Ranges that are constantly fed down to the grass-roots will not reseed themselves, and thus will run out.

There is abundant proof of this abuse of the ranges. Some ranges are not only overfed, but the grass is actually stamped out and ground into the earth by innumerable hoof-prints. Originally there were springs and small rivulets cropping out of the prairies here and there, but these seem to have become dry from a general overstocking of the range. There were also many spots that were sheltered by tall grasses and wild shrubbery, so that the snow would be drifted among them. This snow remaining on the ground until quite late in the spring would enable these spots to retain moisture sufficient to impart a vigorous growth to the grass. But these have been fed down so that they are now comparatively bare.

Various experiments have been made by scientists with a view of reseeding the depleted ranges. Prof. B. C. Buffum, the agriculturist of the Colorado Agricultural College, while occupying a similar position in Wyoming University some years ago tried the seeding of some prairie-lands with French clover, or "San foin." The experiment was made on the Laramie plains, a bleak and wind-swept region, at an altitude of seventy-two hundred feet above sea-level, and was attended with a good degree of success. The seed came up, and produced a large amount of food for six successive years.

The most promising grasses that have thus far been experimented with for range purposes are the blue-stems, brome-grass and rye-grasses. There are two or three species of the brome-grass that have done very well during the past year's experiments, both with and without irrigation. "Bromus inermis" is a very promising grass. It is exceedingly hardy, and grows late in the season, thus producing green pasturage long after the general run of grasses have cured upon the stem. The most promising of the meadow-grasses thus far experimented with are the brome-grass, fescue, tall oat-grass, orchard-grass and the Kentucky blue-grass. H. A. CRAFTS.

Gardening

By T. GREINER

TOBACCO-DUST is still a leader among insect-repelling substances, useful alike for flea-beetle, cabbage-maggots and cabbage-worm, aphides (plant-lice), cucumber-beetles, and many others. The finest and strongest tobacco-dust, of course, is most effective.

PLUM FOR CANNING.—A neighboring fruit-grower the other day asked me what he should do with his Satsuma, or Japanese Blood, plums. Why, can them, of course. This plum, although quite susceptible to rot-attacks, is one of the finest canning-fruits ever grown. If I want any plum for canning it must be Satsuma. Give generous samples to your neighbors and townspeople for a trial can, and they will call for them afterward.

THE PRICKLY LETTUCE, a weed introduced here only a very few years ago in some mysterious manner, now is a common occupant of our roadsides, meadows, pastures and cultivated fields. I find it even in my strawberry-patch. But while a bad visitor in meadows and pastures, and worse on roadsides and other out-of-the-way places, we can easily control it in our gardens. Cultivators and weederers do the business for it.

LETTUCE OF ESPECIAL TENDERNESSE ready for use in early spring may be grown under a covering of cheese-cloth. I have it in an ordinary cold-frame kept continuously under the protection of a cheese-cloth-covered sash. Thus it does not require much attention, and comparatively little water. Pull out the weeds a few times, and enjoy first-class early lettuce. After this supply gives out I use the thinnings from the rows of the various early varieties started early from seed in open ground. Plants are left standing every four or five inches apart, to make nice heads. They furnish the next supply.

CUCUMBER PICKLES FOR MARKET.—T. B. B., a reader in Louisburg, Kan., asks how cucumber pickles are prepared for market, and what variety to plant. There are a number of good kinds. White Spine and Long Green, with their sports and strains, are standard sorts, and popular everywhere. The pickles should be gathered promptly every day or two, and before they are overgrown. Small pickles, say three or four inches long, are most in demand, and usually bring the best prices. Still smaller ones sell well, too. The point is to have the pickles washed perfectly clean, then sorted thoroughly, so that all in one and the same package are of the same size. They may be put in any package, as usually they are sold by the hundred or thousand. That is about all that can be said about it.

SOWING SEED FOR SETS.—J. F., of Oswegatchie, N. Y., wants to know the proper time for sowing onion-seed to make sets for planting next spring. If the soil conditions are favorable the seed may be sown quite late in spring, and will have plenty of time to mature the sets. The soil should be very clean and quite sandy; excessive richness is not required. A sandy soil of quite moderate fertility will do well enough. It is usually much easier to start an onion-plantation from seed, in open ground, and get the seed to sprout and the plants to grow ahead of the weeds, if the sowing is done as early as possible in the spring. That is the general practice, and the one to be recommended. Late sowing is liable to result in patches that are choked out by weeds, and thus make a failure.

THE WILSON STRAWBERRY.—In the hands of some growers (in favorable strawberry locations) the old Wilson is as good as it ever was, and it still remains a leading sort for canning. The original good Wilson is found where rusts and blights and insect-enemies of the strawberry are practically unknown. The run-down Wilson grows where plants have for years been propagated from rust-struck beds. Undoubtedly, however, it is true that there is a great chance for improving the Wilson, or any other variety as now grown, by selecting the most prolific plants in the patch for propagation. If we continue on this line as long as Professor Goff, who for a dozen years or more has annually selected potatoes for seed from the most prolific hills, we may discover a similar increase in the yield of berries over that from ordinary plants, as he did in the yield of potatoes.

ONION-PLANTS.—There always seems to be some demand for Prizetaker or other Spanish onion-plants for which no provision has been made. I am frequently asked where such plants might be procured, but I know of no one who makes a business of growing them for sale. A reader in Herkimer County, N. Y., would like to try the newer system the first year, but does not care to go to the expense of making a hotbed. He would rather buy some thousand of plants. I believe these onion seedlings could be grown and sold at a fair profit. One of the best crops of Prizetakers, however, that I have ever grown was from plants started in hotbed early in April, and transplanted the latter part of May. A hotbed is not an expensive affair, and several thousand plants—all the reader would want for a first trial—can be grown under a single common hotbed-sash. I grow such plants in the greenhouse because I have the facilities. Otherwise I would endeavor to secure similar results with a cheap hotbed.

GROWING ASPARAGUS.—S. J. B., one of our readers, inquires about the best way and the best time of starting an asparagus-plantation, also about varieties, etc. First of all I have to say that if I had a piece of warm, sandy, well-drained loam available for the purpose I would think the best time to start an asparagus-patch is now, at once, without more delay than necessary to secure a lot of good plants. Usually I would prefer to grow my own plants, and grow them in good, rich loam, and properly pushed and thinned in order to get good, large, one-year-old plants, which I think are far better than the average run of two-year-old plants that one can buy. By looking around one may be able to get good plants this fall, and I would not wait even until spring, although that is also a good time to set plants. The early buyer catches the big plants, usually, which is one reason more why it is better to start the patch in the fall. I make the ground very rich; in fact, it cannot be made too rich. I give each plant plenty of room, say not less than a dozen square feet. I plant them deep, so that a shallow-running plow will not injure the crown. To renew an old plantation, plow it over shallow, applying manure or any good commercial vegetable or potato manure containing a good percentage of potash. Any of our standard varieties may be used. Palmetto seems more liable than others to resist the rust-attacks. Columbian Mammoth White is good. If you wish to raise your own plants next year, sow the seed thinly in drills, the drills being a foot or fourteen inches apart, by hand or with the garden-drill. Do this early in the spring, while the ground is yet quite moist. The seeds are large and hard, and require a good deal of moisture to germinate. In a dry time the seed may be soaked for a few hours in hot water. It will then sprout much more promptly. Clipping a corner of the hard shell off each seed will also serve to hasten the process of germination. Every year that I have a chance to observe the doings in our local markets strengthens my belief in the profitability of asparagus when grown in a proper manner. Even poorly grown stalks sell in our markets, but really good stalks never fail to be in ready demand, at good prices.

Fruit-Growing

By S. B. GREEN

MOVING BLACK-WALNUT SEEDLINGS.—M. A., Zanesboro, Minn. One-year-old black-walnut seedlings may be safely moved in April. There is no necessity of getting land into fine cultivation before planting, as the trees are deep-rooted, and on moist soil will take care of themselves in spite of the grass. I should think you had better put them about twenty feet apart each way, with the expectation that should they do very well one half of them will be cut out when they begin to crowd. You will find when you come to dig them that the root-system is confined to one straight tap-root, and in moving them you should take as much of this as practicable.

NORWAY POPLAR.—It is only occasionally that I have run across the name of Norway poplar. I have seen it in several parts of Minnesota, it having been brought in from Norway. It is evidently a form of the cottonwood from this country, which has shown superior qualities. I am inclined to think it is the same as the much-advertised Carolina poplar. This is a form that originated in France from selection from American cottonwood. It is, I think, a little sturdier than our common cottonwood, and less liable to leaf-rust. It has been planted to a very great extent in various European countries, and is well known among the nurserymen there. It has recently been imported into this country, and is being widely advertised here. People are planting it, thinking they have a new thing.

SUN-SCALD.—J. W. S., Merriam Park, Minn. The specimens of injured bark from your young box-elders lead me to think that in all probability they were sun-scalded several years ago, which killed the bark on the southwest side, and that under this dead bark the bark-boring beetles found lodgment. Your best remedy, probably, is to take off all the dead bark on that side down to good live bark and wood, and then cover the whole surface with grafting-wax, or, if this is not convenient, with white lead put on with a putty-knife. This will be found satisfactory, and after covering it this way sew a piece of burlap around over the whole. I think that if treated in this way you will get rid of the borers, and the bark will heal up and no serious injury result. It is probable that the box-elders were sun-scalded some three years ago, when we had a great deal of such trouble.

PRUNING PEACHES IN FLOWER.—J. H. E., Syria, Okla. It is best not to prune peach-trees just as the buds start. I do not think it would seriously injure them to cut off the new wood while they are in flower, but would prefer to wait until the fruit sets, and then prune. Of course, the best time for pruning peaches is in the latter part of winter or very early in the spring, before the buds begin to swell, and in my practice I have found it best to remove in pruning from one half to two thirds of the new growth each season. This thins the fruit and tends to keep the trees in a good, compact form. Pruning on the young wood may be done at any time, however, without much danger of serious injury, but successive pruning of the old wood is apt to cause bad wounds at some seasons of the year. Perhaps as good a time for moderately heavy pruning is some time in early June.

BOX-ELDER BUGS.—Box-elder bugs have been sent in for naming. This is a pest that, while it does not kill our box-elder trees, injures and weakens them by sucking the sap. There is no practical remedy for them which can be applied during the summer except by means of a spray-pump, one large enough to spray the whole tree, and something of this sort is quite beyond the reach of the average tree-owner. Where the bugs are very numerous it would seem to be the province of a town or village to undertake the destruction of this pest. Many may be killed in the autumn when gathered together on tree-trunks or near-by places. This bug is not a new one, but has been known many years. It has, however, enjoyed an immunity from its enemies for the past few years, which has permitted it to become extremely numerous. I have faith to believe, however, that before many years we will see their number largely reduced.

LICE ON SNOWBALL.—E. C. B., Minneapolis, Minn. I am surprised that by the use of tobacco-water you have not been able to kill the lice that attacked the new growth of your snowballs, and I think that perhaps it is due to the way in which you have used it. For this purpose you should use tobacco-stems. These should be scalded, and then the liquor used at about the color of strong tea. In using it, dip the ends of the branches into the basin containing the tobacco-water. Begin doing this as soon as the new growth appears. Do not wait until the lice are abundant and the leaves have rolled up. If you look carefully you will probably find some lice on the plants very early in the season. Once in awhile we get tobacco-stems that are so mild that they do not work well either in the greenhouse for smudging nor for tobacco-water. If you have trouble about this material working well you can certainly destroy them by using whale-oil soap-suds.

HOW TO TREAT PINE AND ARBOR-VITAE CONES.—F. T., Grand Meadow, Minn. The treatment of pine-cones in order to make the seed grow varies with the different species. Most of our pines open their cones in autumn, and the seed shells out before the cones fall. In the case of the jack-pine (*P. banksiana*), however, the cones will remain upon the tree for perhaps twenty years without opening, especially where they are upon the north side of the tree. Scotch-pine cones do not open until spring, and it is customary to open them in the autumn and winter by slightly heating them, which causes the scales to contract and open. The same treatment will also open the scales of the jack-pine. Arbor-vitae generally shells out in the late autumn and early winter. The cones should be gathered before they have opened, and if dried or gently warmed the seeds will easily come out. After taking out the seed it may be kept in a dry, cold shed through the winter, and be sown in the spring. I prefer, however, to keep it in such a place mixed with sand. Such seed should be sown very early in the spring, as the cool weather of that season is much better adapted to it than the warm, moist days that we are liable to have later on, and which are often very disastrous to young seedlings.

BORERS—INJURED CHERRY-TREES.—W. E., Pinola, Ill. Borers in trees can generally be best destroyed, when they are discovered soon after entering, by digging them out with a knife. Where they have gone deeply into the tree, and cannot be reached with a knife, then it is a good plan to inject bisulphid of carbon into the tree. To do this, put it in an ordinary oil-dropper, inject it into the holes, and stop the holes up with a little putty. In the case of peach-trees this remedy will not work very well, owing to the fact that so much gum comes out from around the borings near the surface of the ground. In this case the knife will be found the best remedy.—I do not know what the trouble can be with your cherry-trees, but should judge they are in a very unhealthy condition. There are a number of things that might produce the trouble which you mention. I think most likely that they have been root-injured, and that a large portion of the roots have been killed, so that the tree does not have sufficient vigor. If they are on high, dry soil, manuring with stable manure is about all you can do for them. In addition to this the roots should be protected with a light mulch in winter. Before doing this, however, see that the trunk of the tree is protected from mice by banking up for a foot or so close to the tree or else by surrounding the tree with wire mosquito-netting or similar material.

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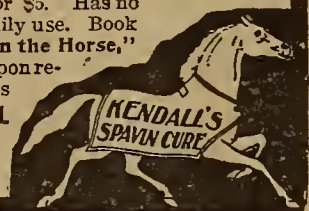


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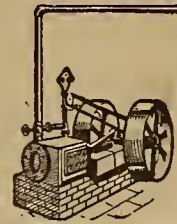
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Live Stock and Dairy

GOOD HORSES REGARDLESS OF BREED

MUCH has been said in your journal about the relative merits of the breeds of draft-horses. Last season a prominent Hereford breeder of Missouri told me that notwithstanding the fact that he had been a lover and breeder of the "white-faces" all his life, he still believes that there is no best breed of cattle or anything else; that it is purely a matter of fancy, and that each and every breed has not only its fanciers, but also its distinct place in business. This is good logic, and I feel that I can apply it to the breeds of draft-horses.

In the first place, we have all seen good and poor horses of all breeds and types; we have all seen beautiful Percherons almost faultless in form and action and capable of transmitting to their progeny all the desirable qualities of the breed, and we have seen Clydesdales possessed of every characteristic that could be asked for in a draft-horse and that would sire very fine draft-colts from all kinds of scrub mares. We also have seen some curby Percherons long in the back, weak in the coupling and breeders of colts exactly like themselves. We have seen Clydesdales with very bad flat feet, and found their colts similarly objectionable. Have we not all seen these things?

Now, as much as possible I like to see a man breed the kind of stock that he likes best, and to raise horses I recommend that he first select good brood-mares of the breed he likes best, and use a stallion of the same breed. Use a good sound sire, and if possible one that you know to be a good breeder. The fact that a horse has been imported is no evidence that he is a better horse than the home-bred horse across the road bred by John Smith. Select what you know to be a good sound stallion, and then if your colts are not good you cannot blame yourself. And when you have a nice team of good horses raised they will bring good money regardless of the breed.—J. G. Willis, in the Breeder's Gazette.

MILK-MAKING AND MILK-LOSING

Thousands of dairymen are constantly studying and experimenting with the problem of increasing the milk product from their herds by means of various changes and combinations of feed rations, that they may get the greatest value in dairy products at the least outlay of expense. There is no small proportion of these careful and up-to-date feeders, however, who largely overlook another quite as important essential of success in dairying—namely, getting the fullest quantity and best quality of milk from their animals after having successfully fed it into them. One dairyman may continue feeding the identical ration which is being fed to his neighbor's herd adjoining, and the animals composing the herds be equally good, yet the balance-sheets may show very different profits.

Cows are the most delicate of dairy-machines. After their most needful physical wants have been well looked after, such as feeding, watering, stabling, grooming and keeping them free from pests and vermin, if the usage and handling given them is rough and irritating the returns will fall short of the fullest value which might otherwise have been obtained. Dairy-cows constantly kept excited and badgered by inconsiderate milkers and caretakers will not only give a less quantity of milk and be injured for future productiveness, but the quality of the milk itself and the products resulting from it are likewise injured and decreased, as has been fully proved by repeated tests for butter-fats, casein, etc.

Another source of loss often to be observed among careless dairymen is the allowing of exposure to severe storms in spring and fall while at pasture; and, what is almost equally as injurious, the fierce heat of summer without protection provided. In such cases as with those mentioned before the milk may be fed into the animals, but it cannot be milked out.

One of the most beneficial results of the Pan-American and like dairy exhibits comes from the impression produced upon the minds of multitudes of dairymen of the great importance that is attached to the comfort, careful handling and gentle treatment the animals received during their long and severe test, and what large variations in yield are produced by slight causes. B. F. W. T.

KICKING COWS

The question is frequently asked, "What is the best way to handle a kicking cow?" Various answers may be given, and the remedies described may be more or less effectual in some cases. Some advise chaining the two hind feet together, but in this case the remedy is worse than the disease. Some say to tie the right hind foot back well to a post in the rear. This is better than the other remedy, but not always effectual and no desirable task to perform. Others advise us to tie a rope over the rump and before the udder, drawing it fairly tight. This will answer on some cows, but not on a genuine kicking cow. I recently visited a large dairy near Grand Rapids, Mich., and found in use a device consisting of a strong, wide board on each side of the cow pressed up close against her sides, and secured both in the front and rear so as to almost raise the cow off her feet. This was pronounced effectual, but it is cumbersome to handle and requires some time to apply. A method followed at "Shady Nook" farm for several years was to tie the right fore foot up to the body with a rope, strap or chain. The cow was thus compelled to stand on three feet, and of course could not well spare one of them for kicking. This will break any cow in a few applications, but it took some time to apply it, and for this reason is objectionable.

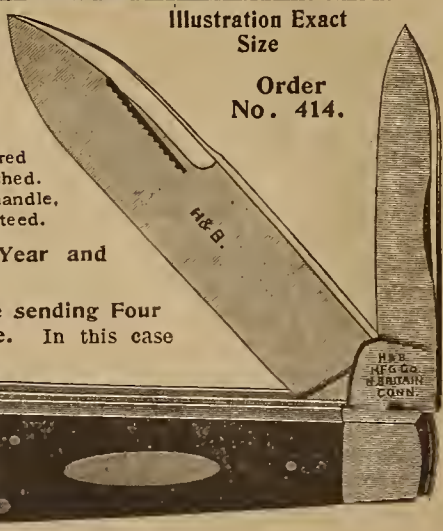
The best remedy I have ever found consists in slipping a spring nose-ring into the cow's nose, and then raising her head until her nose is about on a level with her back. Tie the rope to a piece of timber over the cow's head in such a manner as to hold her head in this position until she is milked, and two or three applications will teach her to keep her feet quiet while she is being milked.

One thing should always be remembered in handling the cow, and that is to go about the work quietly and not attempt to apply any penalty until after the offense has been committed. I proceed to milk as if I had entire confidence in the cow. If she kicks, I get the rope and nose-ring, which hang in the stable ready for use, fasten the nose-ring in position, slip the rope over a two-by-four that crosses over the cows' heads, and tie the end to one side of the stall. When the milking is finished her nose is released without a word or a blow, and the cow has time for reflecting over the evil of her ways, and will soon conclude that she should mend her ways and live the life of an exemplary cow. This plan has been in use with us two or three years, and I believe it will redeem the worst case of kicking cows ever known. It is so easily done as to avoid any complaint on that score. It is not abusive to the animal, and not at all likely to cause her injury, and yet it is so effectual that it fills the requirements in every way.

Some will say that if the animal is always kindly treated she will never kick. That is not so, and no one who has handled many cows will say that. Among the cows I now milk is a beautiful fawn-colored animal which I gave to the two girls when she was quite a small calf. The two girls petted her as a calf, and she was always nice and quiet. When her first calf was born I decided to milk this heifer myself to see how soon she would become sufficiently quiet for the little girls to milk. She was pretty nervous and did a good deal of stepping about, but in a few weeks became very quiet. When her second calf was weaned she resented being deprived of her offspring, and manifested her disapproval by waiting until her milk was all drawn, then quietly kicking over the bucket. Two or three applications of the nose-ring showed her the wrongdoing, and she is now milked without trouble. JOHN L. SHAWVER.

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Order
No. 414.



Live Stock and Dairy

RULING OR BEING RULED IN THE DAIRY

There is much restlessness among the farmers of the country on the question of dairying. What shall we do with our milk? We can no longer hire reliable help. Our wives are so burdened with other cares that they do not know how to spare the time to make up the milk at home. We ourselves never have made a practice of doing that kind of work. Altogether we are about discouraged. This is the plaint which goes up all over the country.

Here the creamery steps in, and says, "Let us take your milk and work it up for you. We will make a better article of butter than is turned out by most farmers. We have facilities for finding a market that surpass anything you yourself can do. We will give you the highest market prices less a small percentage for making, and will give you back your skim-milk, with which to feed the calves and the pigs."

This strikes us favorably, and we decide to send our milk to the creamery. This, however, does not long prove satisfactory. There are so many considerations of importance which we did not think of beforehand. There is the test, for one thing. We are more or less given to thinking that our cows are capable of giving just as rich milk, and milk that will test just as high if fairly treated, as any of our neighbors. In the matter of the milk received back is another thing. Often it is so sour and foul that the calves will not drink it. We feel as if we were insulting them to put it before them.

Now comes the cooperative creamery. "We will take this matter into our own hands and control it from one end to the other," argue the farmers. This would be the highest possible plan of success were it not so true that no sooner do the farmers come to this conclusion than outsiders, learning of their intention, come in with their grand schemes, and say, "We have had experience in such matters. We make it our business to promote just such plans. Trust us, and we will fix you all right." So before they really know what they are doing, the farmers awake to find that they have paid an outrageous price for their building and equipments. They have saddled upon themselves a burden which it will take years to shake off.

Cooperative creameries are all right, but the farmers should build, equip and in every way control them themselves. They need no help from professional promoters. They will regret it if they have anything to do with them. The farmers themselves should rule instead of being ruled. They have it in their power to do this. Their own best interests dictate that they shall do it. Many have put themselves in the power of this class of men, and mortgaged their cows and their prospects of success for years because they allowed themselves to be deceived in this way.

Then, after the cooperative creamery has been put up and is running smoothly, let each man determine that so far as lies in his power the way of the concern shall be smooth for all time. The rock on which many cooperative concerns have gone to pieces has been the little jealousies and the desire to be "at the head of the heap" which so often comes into our heads. This should be laid aside very quickly. It must be if we are to look for genuine success.

E. L. VINCENT.

TUNIS SHEEP NOTES

It has been eight years since the Tunis sheep were introduced in Indiana. In 1894 the writer purchased and shipped ten head of Tunis sheep from Col. M. R. Spiguer's flock on the Congree River, in South Carolina. It was at that time the only pure-bred flock of Tunis sheep in America.

The Tunis sheep have prospered and multiplied far beyond my expectations. They have no superior for hardiness. I have offered ten dollars to any one finding a sheep in my Tunis flock with a snotty nose at any season of the year. The sheep are not large; rams at maturity, in good flesh, weigh two hundred pounds, ewes about one hundred and fifty pounds.

Flocks of Tunis sheep are now successfully bred and raised in twenty-five states of the Union, and in New Zealand. Mr. Chas. Rountree, of Indiana, who owns the largest flock of Tunis sheep in America, took fourteen head of his sheep to the great Chicago Live-Stock Show last December. The "American Breeder" of Chicago says of them: "Mr. Chas. Rountree, the Tunis breeder of Indiana, came up to the big show with fourteen representative Tunis rams, ewes, wethers and lambs, which, owing to an oversight, were not admitted to the



TUNIS SHEEP

show-pens, but were put on exhibition in one of the big sheep-barns, where they attracted a great deal of attention. The June and November lambs and their mothers were magnets of special attraction and elicited much favorable comment. The Tunis carcass test made by a leading packing-house at the stock-yards, a report of which may be found on another page, will challenge attention for its surprising results. When sheep that can scarcely be called fed, or fitted, dress sixty per cent net, as two of these animals did, their striking killing-qualities may well arrest the attention of breeders and feeders."

Mr. Clark Allis, of New York, and others who make a specialty of raising early lambs for the spring market, say of them: "Tunis lambs will bring from one dollar to one dollar and fifty cents a head more than lambs of other breeds of the same age and care. Butchers say they never have to feel a Tunis lamb to know if it is fat; they are always fat."

Tunis lambs should have their tails docked short, as the fat tail in this country is only a nuisance. When their tails are docked, the fat that would have accumulated in the tail forms in the hip and back, making that wonderful mutton carcass that tested two per cent higher than the champion carcass did at the great Chicago killing-test.

Tunis sheep clip from six to twelve pounds of good medium wool. We can have ewes bring lambs in any month desired. There is a scarcity of breeding-ewes in the United States. The lambs when young are from solid red to white in color, but by the time they are one year old there is very little difference in the color of the wool in a flock, all being white or light gray.

J. A. GUILLIAMS.

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ending



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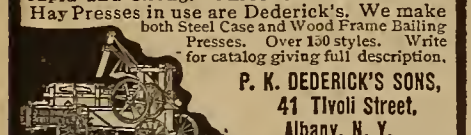
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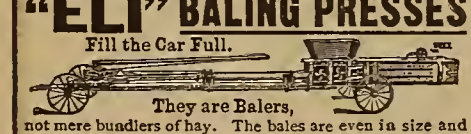
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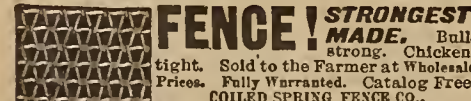
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If afflicted with weak eyes, use **Thompson's Eye Water**

Poultry-Raising

By P. H. JACOBS

WATER IN SUMMER

FOWLS cannot thrive unless well provided with water, hence the supply must not be neglected. If there is a stream or good pond anywhere, near the house no water need be given; but if, on the other hand, there is none available for the birds, it must be given to them, and also be renewed daily. The fowls will drink the drainings from the manure-heap, and, as must be evident to all, this is likely to cause disease. Pure water is essential at all seasons.

POULTRY ON TOWN LOTS

There are many persons that live in the suburbs of cities who have small lots suitable for poultry. To keep poultry under such circumstances is as much a pleasure as profit. If the yard is well fenced, and the fence high, either Brown or White Leghorns will do well. So will the Silver-spangled, Silver-penciled, Gold-spangled and Black Hamburgs. Then there is also the Black Spanish, which possesses great vitality. All of these breeds are non-sitters, lay pure white eggs, and lay a large number.

WILD TURKEY CROSSES

The wild turkey can be tamed if taken very young, and it will cross with the common kinds. A half-bred wild turkey will become almost as domesticated as those raised on the farm from ordinary stock, but it will have a better constitution, can be more easily raised, and will add vigor to the flock. They are no larger than the common turkeys, nor do they mature as soon, but a cross of the wild and common turkey will thrive and exist where the common turkeys would die off as soon as hatched.

CROSSING THE BREEDS

Crossing is not always judicious, and should not be resorted to except to blend the good qualities of two excellent breeds. Whenever a cross fails to give satisfactory results try some other cross the next season. The cross of the Brahma and the Leghorn has been tested, and found one of the best, as it overcomes many of the faults complained of in both the original breeds. It may be claimed, however, that pure breeds are better than crosses, the above breeds being the favorites with those who still persist in crossing.

GET RID OF THE MALES

From the last of July to the middle of January a flock of hens do much better without males among them, and will continue to lay. They are generally quieter and ramble over the fields less, while they also have more room and are better contented. Some people make a practice of saving all the eggs laid during September and October to put down in brine or some other preservative, to keep for use when the snow flies. If they are carefully handled, stood on the small end, and kept in a cool place, they will keep several weeks without any pickle or preservative.

DESIGNING POULTRY-HOUSES

There is no necessity for expensive or elaborately built houses. All the ornament that can be applied will amount to nothing unless the hens are kept comfortable. A poultry-house that is low at the rear, and so constructed as to admit of as little loss of space as possible, with plenty of light, will give better results than some others. The conveniences added to poultry-houses are often such as the poultryman desired for himself, but to which the fowls are not partial. In building a poultry-house think only of how to accommodate the birds, and not how to suit yourself.

HANDLING SICK BIRDS

When a bird becomes sick it should be placed in a coop by itself; or a number may be put together, so as to permit of handling them without frightening the others. If a bird refuses to eat it indicates that it is a serious case. Food, however, should not be forced upon them other than to give them something nourishing. A tablespoonful of warm milk with two drops of brandy will often invigorate a sick bird and induce it to eat, and for that purpose oatmeal boiled in milk to a thick consistency is excellent. A little finely chopped meat often proves quite beneficial, but it is well not to force too much at a time upon them.

PROFITS AND LABOR

Poultry becomes an important branch of industry on farms in France compared with those in this country. As many as five hundred fowls are kept on an acre of land; but careful attention is given, and the profits are large. In this country the poultry department seems to be beyond the notice of the farmer, the hens being turned over to the female members of the family, but in France it is the most important of all. Poultry as a business demands too much labor, especially in winter, to expect women to care for the fowls. If farmers will give more consideration to the poultry themselves they will find they can secure much larger profits in that direction than from any other source in proportion to the amount of capital invested.

THE HIGH-FLYERS

A flock of hens in a yard may be able to go over a fence and not know it. They are afraid to attempt it. But let one hen go over, and she will be found outside every day, and will soon teach the others. A fence seven feet high should be sufficient. If the hens go over it they will also go over a nine-foot fence, or a fourteen-foot fence. Like human beings, it depends on how they are raised. A strip

of wire along the top of the fence, but six inches from it on the inside, will serve as a protection, as a hen always alights on the top of the fence before she goes over; hence, in flying up she strikes the wire, and is thrown back into the yard. To keep hens from flying over the fence make them work. Give

them something to do. Idleness is the cause of all the vices among poultry, such as feather-pulling, flying, egg-eating, etc. Hens are creatures of habit, and they never give up a habit. If you find that one of the hens has discovered how to go over the fence, get rid of her at once, or the others will soon follow.

NOTES

Cleanliness is an enemy of disease. Keep the water-vessels in the shade. Filthy drinking-vessels introduce disease. Better have the poultry hungry than overfed. It wouldn't be a bad idea to clean that feed-trough. Fowls soon become accustomed to regular hours of feeding.

If you are feeding green cut bone in summer, be sure that the meat is not tainted.

The garden affords green stuff that is needed and will be relished by the shut-in fowls.

The poultrykeeper who does not provide suitable shade for his fowls ought to be obliged to spend a day in their yards when the thermometer registers from ninety-five degrees to one hundred degrees in the shade.—Farm Journal.

CARE OF DUCKLINGS

There is no reason why ducklings should not grow at this season; but if they are crowded or their yards are filthy they will not thrive. The kind of food is not all that is necessary to success. A duck should be full-grown when three months old, so far as size is concerned. It is often puzzling when apparently healthy ducklings die, and there is but little opportunity to try remedies. Filth is fatal to young ducklings, especially in their yards, as they will swallow droppings in their eagerness to pick up anything that they see. And when this happens they are liable to die suddenly. A duckling may be suffocated when eating soft food if it cannot reach water, for the reason that its nostrils become clogged, thus making breathing difficult. The water must be deep enough in the trough to permit the duckling to bury its head in the fluid. It will eat a little and then run to the trough. That is why they throw so much of the water out of the trough and on the ground, as they are then washing their heads, bills and nostrils. They will die if they cannot clean off the food from their bills. When ducklings are fed very heavily on an exclusive grain diet they will sometimes have giddiness, weak legs, and may be unable to stand. Damp quarters cause weak legs, hence they should sleep on cut straw.

SPECIAL CROPS FOR POULTRY

Special crops for poultry could be made profitable, as a great many crops can be grown to advantage on farms where large numbers of poultry are kept, and which create a home demand for the articles produced. Seeds of sunflower, millet, rape, kale, Kafir-corn, pop-corn, and even sorghum, could be utilized, the cattle and sheep consuming the bulky portions, and the fowls the seeds. Where any of such foods become too woody for stock they may be made to do service as bedding. Cow-peas are highly relished by fowls, and so is white clover, while crimson clover will supply green food late in the fall and very early in the spring, the same as rye. The regulation diet of corn and wheat in winter is not conducive to the production of eggs, but when the fowls have a variety they will largely increase this production. By selling such crops in the form of eggs better prices are obtained therefor, while the revenue from eggs and poultry will be obtained at a season of the year when the farm will be producing nothing at all. Some special foods may be grown on the farm that cannot easily be procured otherwise. A poultryman who makes his hens lay grows a patch of cow-peas. The seed is put away for the use of the fowls in winter, the vines being fed to his cow. The peas are cooked—one quart for thirty hens—and thickened with a mixture of equal parts of bran and corn-meal. For summer he grows a patch in some other location, and when the peas are matured he lets his hens go in and help themselves, they receiving no other food. It may be necessary if the vines are too high to run a roller over them. The vines are left as a covering for the land, being plowed under in the spring. The peas pay an excellent profit in eggs, and the hens are kept out of mischief and in a thrifty condition in working for them.

ABSCCESS.—Mrs. M. C., Chillicothe, Mo., mentions an abscess about the size of an egg on the leg of one of her fowls; it has afflicted the fowl for seven weeks. If not too troublesome, lance the abscess and poultice the leg, sponging also with a solution of peroxid of hydrogen. It would be economical to destroy the fowl.

BLINDNESS OF CHICKS.—Mrs. R. L. K., Marysville, Kan., complains that her little chicks seem to be going blind; she gives no details of management. The cause may be exposure to drafts, or it may be roup. An excellent remedy is to change their quarters to a new location, vary the food, and sponge their faces once a day with a warm solution of boracic acid.

PROBABLY LICE.—Mrs. S. M. R., Jacksonboro, Ohio, states that she has about three hundred chicks; that last year their feathers were "spready," and that this year the same symptoms appear. It is difficult to assign a cause without knowing all the conditions, but it is probable that lice have attacked them since the weather became warm. Clean their quarters, and dust the chicks twice a week with insect-powder. The advertised "lice-killers" are excellent remedies.

The Grange

By MRS. MARY E. LEE

THE OBSERVATORY

Dainty homes and good cookery usually indicate happy families.

It is useless for an individual or community to prate of culture while lacking the evidences of culture.

A shrieking fourteen-to-twenty-stop organ is a pretty good indication of coarseness and cheap sentiment.

When a man rails at aristocracy and wealth, and coddles you with "The hearts of the people are always right," be assured he has an ax to grind or is a fool.

That coöperative enterprise founded on sentiment is doomed to failure. The nearer cold, business principles are adhered to, the greater the chances of success and longevity.

The kind of a book a man calls "good" is a fit key to his mental status. If you can't appreciate at least one of the minds the world calls great, policy would bid you keep silent on all.

It is a doubtful compliment to a writer or paper to say, "We believe everything you say to be true." Nothing is true till it has been proven so by each individual. The true office of the printed page is to provoke thought and investigation.

BOOKS FOR SUMMER READING

Have you read Ebers' "Egyptian Princess" or "Homo Sum;" Eliot's "Romola," "Daniel Deronda" or "Mill on the Floss;" Dumas' "Count of Monte Cristo" and the "D'Artagnan Romances?"

If not, you have delightful hours before you. We will not urge you to read the delightful philosophical and historical works in the hot summer months if you do not already love them, but we do want you to read some of the best and most entertaining romances. When fall and winter comes we will have our heavier reading.

How would our readers like to form a reading-club, and follow out a course of reading?

HELPFUL PROGRAMS

During the summer months let the lecture-hour be one of recreation and helpfulness in the daily life. Bring up current events that are of importance. Set aside a time when different members can tell, shortly and tersely, where they have learned to economize time and strength. Do not ask for papers. Just ask for the experience of the days. Every one of the family is working hard. Crowd in as much jollity as possible. Do not let the hour drag. If interest is lacking, if there are painful moments of silence, bring the lecture-hour to a quick termination, dismiss the grange, and give yourselves over to having a downright good time. Fun, amusement, recreation, are absolutely essential to tired bodies. A good laugh will relax the muscles and make one grow young.

"Every care to our coffin adds a nail, no doubt,
And every laugh so merry, draws one out."

THE LADY OFFICERS

The four officers—Ceres, Pomona, Flora and L. A. S.—are often regarded as purely ornamental, and of no value whatever in the scheme of grange-work, save to be sure that some of the ladies shall hold office. On the contrary, there are none other more capable of enlargement or fuller of opportunities for rendering farm homes gracious and beautiful. At the last Ohio State Grange Sisters Hogsett, Anderson, Ellis and Rathbun furnished some of the most enjoyable hours of the session. The exercises over which they presided were entrancingly beautiful and impressive. It was a revelation of what a few women with taste, culture, enthusiasm and social experience can do toward making the grange an ideal club for the cultured farmer's family. It also opened up vistas of usefulness and beauty to many who seldom have access to such object-lessons.

There is nothing that will so contribute to the permanent welfare of the farmer as correct notions of taste. Desire for the beautiful and artistic presupposes a taste, possibly latent and uncultivated, for the higher things of life. Develop this and he will be content with nothing but the best. To secure this he must secure adequate returns for his products.

Surely these officers are more than ornamental. They are exceedingly valuable and practical.

VALUABLE HOURS

"What do you consider the most valuable hours of your life, from a commercial standpoint?" I asked a wealthy farmer.

"The most valuable time," he responded promptly, "was the summer I had my leg broken. I was fixing the hay-rigging for the first load of hay, when I slipped, fell, and broke my leg. For a time I was prostrated by the calamity. I really was not conscious of the pain at all. Overwhelming defeat stared me in the face. I was deep in debt, and was counting on the summer's work to help me out and buy some much-needed machinery. And here I was as helpless as a child, with corn to plow, sorghum to drill, hay and wheat harvest coming on, potatoes and fruit to be looked after. I never before realized what an immense amount of work could be crowded in one month's time.

"My wife, God bless her! saved the day for us. We had but one hand, and could get none other for love or money. She was not strong, but she went into the hay-field, and rode the mower and rake. The hand loaded the hay alone, but she helped unload. She kept things moving on the farm better than if I had been there. One thing I noticed, she always laid down every afternoon. And whenever things began to fret her, she stopped and took herself in hand. 'I can never do much when I worry,' she explained, apologetically.

"What little cooking was done our five-year-old boy and I did. He brought things to me, and I sat by the side of the gasoline-stove and cooked enough to keep soul and body in conjunction.

"One day, when I was pitying my wife and worrying over our prospects, she brought me a pencil and paper, saying, 'There is no condition of life, howsoever distressing, but can be turned to account by a wise man. Plan, and write out your plans, how to do work more economically and better. Read it to me when I come in.'

"I did so. There were no more weary hours for me. By the time I was able to be up I had the balance of the season's work mapped out so as to conserve time and energy. We made more that year than in any previous one. Since then there has not been a year that I have not made improvements in my plans. Yes, indeed, that broken leg was worth thousands of dollars to me."

I found myself wishing that many other drudging farmers might get a broken leg, and reap the same benefits.



JAS. BOSS CASE

WON'T BEND OR DENT

WATCH PROTECTION

The Jas. Boss Stiffened Gold Watch Cases are an improvement on solid gold cases. They are stronger and won't bend or dent. Made of two layers of gold, with a layer of stiffening metal between, welded together into one solid sheet. The outside layer contains more gold than can be worn off a case in 25 years, the time for which a Jas. Boss Case is guaranteed.



SOLID GOLD CASE

WILL BEND AND DENT

Jas. Boss Stiffened Gold Watch Cases

are recognized as the standard by all jewelers. They are identical with solid gold cases in appearance and size, but much lower in price. Don't accept any case said to be "just as good" as the Boss. Look for the Keystone trade-mark. Send for booklet.


The Keystone Watch Case Company, Philadelphia.

More Milk. More Money.

Cows will give 15 to 20 per cent. more milk if protected from the annoyance of flies with **Childs' So-Bos-So Kilfly**. It is a thorough fly and insect killer, and it absolutely destroys all bacterial germs. It allays nervousness in horses as well as cows and keeps both in better general condition by the comfort it gives. For scours in calves, hog cholera, and foul in calves' feet it has no equal. It is perfectly harmless to man and beast and may be rapidly applied with **Childs' Electric Sprayer**. It is a true antiseptic and it will keep stables, cow sheds, chicken houses and pig pens in a perfectly sanitary condition. Convenient. Cheap. Practical.

Mr. Jacob Stelbel, Supt. to the Hon. John E. Parsons, Lenox, Mass., says: "I have used So-Bos-So Kilfly with good results. It is a comfort to both man and beast at milking time." Ask your dealer for SO-BOS-SO or send \$2.00 for 1 gallon can and sprayer complete, express paid to any point east of Mississippi river.

CHAS. H. CHILDS & CO., Sole Mfrs., 14 LaFayette Street, UTICA, N. Y.



CHILDS' SO-BOS-SO

TRADE KILFLY MARK



EIGHT DOLLARS

ished, Antique Oak, Drop Head Cabinet Sewing Machine, the equal of sewing machines that cost TWICE THE MONEY elsewhere. for our 5-Drawer, DROP HEAD Cabinet Celebrated **\$10.45** NEW QUEEN Sewing Machine, for the standard ball bearing BURDICK Sewing Machine, the equal of regular \$50.00 and \$60.00 agents' machines. These and many other high grade machines, beautifully illustrated and fully described, the parts, mechanism and special features in our big, new, free Sewing Machine Catalogue. You must write for it. WE CAN SURELY SAVE YOU \$10.00 to \$20.00 ON ANY KIND OF A MACHINE. **THREE MONTHS' FREE TRIAL** For Free Sewing Machine Catalogue, the most wonderful price offerings ever made, our liberal terms, pay after received offer and **THREE MONTHS' FREE TRIAL PLAN**, cut this ad out and mail to **SEARS, ROEBUCK & CO., CHICAGO, ILL.**

AND 95 CENTS buys this High Grade, High Arm, 20-Year GUARANTEED Five-Drawer, Solid Polished, Antique Oak, Drop Head Cabinet Sewing Machine, the equal of sewing machines that cost TWICE THE MONEY elsewhere. for the BEAUTIFUL MARQUETRY DECORATED ED EDEMERSE SEWING MACHINE, for the HIGHEST GRADE Sewing Machine made.

\$11.95

\$15.20

TILE DRAINED LAND

ROUND TILE

is the earliest, easiest worked and most productive land. By using tile you get rid of the surplus water and admit the air to the soil—both necessary to best results in agriculture. My **AGRICULTURAL DRAIN TILE** meets every requirement. Make also Sewer Pipe, Red and Fire Brick, Chimney Tops, Encaustic Side Walk Tile, etc. Write for what you want and prices. **JOHN H. JACKSON, 60 Third Ave. Albany, N.Y.**

6 Silver-Plated Teaspoons

Set No. 60



Cut shows the ACTUAL SIZE

And Farm and Fireside the Remainder of This Year for Only 60c.

Any One Accepting This Offer is Also Entitled to

A Free Count in the Dot Contest Offering \$1,500.00 in Cash Prizes

SEE PAGE 19 OF THIS PAPER

Nickel-Silver Base

The base of this ware is solid nickel-silver, which is white all the way through, positively will not change color or rust, and will wear for a lifetime. It is the highest grade known, being full twenty-five-per-cent nickel.

Coin-Silver Plate

On top of this nickel-silver base is plated the full STANDARD amount of pure coin-silver. This combination makes a ware which we guarantee to give satisfaction. Test it, and if not found exactly as described return it to us and we will refund the money.

Initial Letter

Each spoon is engraved free of charge with an initial letter in Old English. Only one letter on a piece. Be sure to name the initial desired.

Pattern

We have the spoons in two beautiful patterns, as shown by the cuts, No. 60 and No. 14. You can make your choice of pattern. Where no choice is named we will fill orders with our selection. We also reserve the privilege of substituting one pattern for the other if the supply in any particular initial is exhausted. We can thus fill all orders the same day they reach us. It is impossible to describe the beauty of these spoons, and the illustrations fall far short of conveying a full idea of their attractiveness. In finish they are perfect and will render complete satisfaction.

Pattern of Set No. 14



It is Honest Ware and the Ladies of Our Farm and Fireside Family Can Use the Set With Honest Pride.

GUARANTEE

We absolutely guarantee every piece of this ware to be exactly as it is described and to give entire satisfaction or your money will be cheerfully refunded. We are sure it will please you.

PRESENT SUBSCRIBERS ACCEPTING THE ABOVE OFFER WILL HAVE SIX MONTHS ADDED TO THEIR SUBSCRIPTION.

Address **FARM AND FIRESIDE, Springfield, Ohio**

\$27.45 For this Organ

Pay After Received
Offer! One Year's Free Trial!
25-Years' Binding Guarantee!
All explained in our
FREE MUSIC CATALOGUE. We sell pianos from \$89.00 to \$165.00, the equal of instruments sold by dealers and agents at **DOUBLE** our prices. High Grade Violins, Guitars and Mandolins at \$2.45 and upwards. For our beautifully illustrated, big complete Music Catalogue, lowest prices, free trial and pay after received offer, cut this out and mail to **SEARS, ROEBUCK & CO., Chicago, Ill.**



THROUGH GEYSERLAND

Yellowstone Park Tour Arranged by Pennsylvania Lines

The Pennsylvania Lines will run a vestibuled Pullman train from Indianapolis to the Yellowstone National Park, August 14th. The tour will be a model one, and first-class and thoroughly enjoyable and comfortable in every particular. A stop of an entire day will be made at St. Paul and Minneapolis, and shorter stops at other points en route. Arriving at the Park, arrangements have been made for both hotel and camping tours of "Wonderland."

An illustrated itinerary of the tour will be mailed upon application to W. W. Richardson, district passenger agent Pennsylvania Lines, Indianapolis, Ind.



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and Ten Days Free Trial to any person in U. S. or Canada. Not a cent deposit required on our Bicycles in advance.
1902 Models, \$9 to \$15
1900 & '01 Models, best makes, \$7 to \$11
500 Second-Hand Wheels
all makes and models, good as new, \$3 to \$8. Great Factory Clearing Sale at half factory cost. Tires, equipment & sundries, all kinds, half regular prices.
EARN A BICYCLE distributing 1000 catalogues on our new plan.
A RIDER AGENT in each town can make money fast on our wonderful 1902 proposition. Write at once for lowest net prices to agents and our special offer.
MEAD CYCLE CO. Dept. 82 B. CHICAGO, ILL.

FAT
How to reduce it
Mr. Hugo Horn, 344 E. 60th St., New York City, writes:
"It reduced my weight 40 lbs. three years ago, and I have not gained an ounce since." Purely vegetable, and harmless as water. Any one can make it at home at little expense. No starving. No sickness. We will mail a box of it and full particulars in a plain sealed package for 4 cents for postage, etc.
Hall Chemical Co., Dept. B, St. Louis, Mo.

MADE \$105 THE FIRST MONTH
writes FRED. BLODGETT, of N. Y. J. L. BARRICK, of La., writes: "Am making \$3.00 to \$8.00 every day I work." MRS. L. M. ANDERSON, of Iowa, writes: "I made \$3.80 to \$6.50 a day." Hundreds doing likewise. So can you. \$5.00 to \$10.00 daily made plating jewelry, tableware, bicycles, metal goods with gold, silver, nickel, etc. Enormous demand. We teach you **FREE**. Write—offer free.
G. GRAY & CO., Plating Works, A Miami Bldg., Cincinnati, O.

EYESIGHT RESTORED
You can save someone's eyesight by writing Dr. Coffee for his famous free eye book. Contains 80 pages; colored photographs of eyes from life. Aneyehistory. Contains eye tests; worth \$5 but it is free. Tells also how to cure cataracts, scums, sore eyes, failing sight—all eye troubles with painless medicines, at small expense, at home. A. J. Palmer, Melrose, Iowa, was cured of blindness in 3 months. Hope for everyone. Advice free.
DR. W. O. COFFEE, 819 Good Block, Des Moines, Ia.

WROUGHT IRON PIPE
Good condition, used short time only; new threads and couplings; for Steam, Gas or Water; sizes from 1/2 to 12 inch diameter. Our price per foot on 1/2 inch is 3c; on 1 inch 3 1/2c. Write for free catalogue No. 24.
CHICAGO HOUSE WRECKING CO.,
W. 35th and Iron Sts., CHICAGO.

GREAT PRIZE CONTEST

\$1,500.00 Cash Prizes

Contest is open to all. See Page 19 of this issue of the Farm and Fireside for full particulars and list of the great cash prizes.

BOOKKEEPING, SHORTHAND, PENMANSHIP
etc., successfully taught by mail or no charges. **POSITIONS** secured. 10,000 students. Booklet free. **ADD. DEPT. 45. DRAUGHON'S BUS. COL. Nashville Tenn.**

A CRIME TO BE FAT
when for a 2-cent stamp, MRS. LOUISA LAFARGE, 43 Times Building, New York, will tell you how her \$1 prescription took 20 to 120 lbs. off each of over 6,000 men and women. Most effective and least expensive treatment ever offered. Endorsed by United States Health Reports.

IF you want to know how to earn 25 Dollars a Week
and also receive a gold watch as a premium, address **THE PANSY CIGAR CO., BLUEBALL, PA.**

CANCER and Tumors cured by scientific methods. Long experience. No knife used. Book free. Address **Dr. C. Weber, 121 W. 9th St., Cincinnati, O.**

\$8 Paid Per 100 for Distributing Samples of Washing fluid. Send 6c stamp. **A. W. SCOTT, Cohoes, N. Y.**

BED-WETTING CURED. Sample **FREE.** Dr. F. E. May, Bloomington, Ill.

If afflicted with weak eyes use **Thompson's Eye Water**

Around the Fireside

MIDSUMMER PROPHECY

BY HELEN WHITNEY CLARK

Katy sat upon a tree,
Katy-did! Katy-did!
And she sang a song to me,
Katy-did-did!
Sang of summer's sweet perfume,
Of the harvest-days of bloom,
And the corn-top's waving plume,
Katy-did—did—did!

But she sang another tune,
Katy-did! Katy-did!
Said the frost was coming soon,
Katy-did-did!
"Like a prowling thief at night
He will come with chill and blight!"
Thus she sang with all her might,
Katy-did—did—did!

So she gave me warning fair,
Katy-did! Katy-did!
That I might for him prepare,
Katy-did-did!
"Garner all your treasures in,
House them safe in barn and bin."
Thus she sang, "if you would win,"
Katy-did—did—did!

And I know she told me true,
Katy-did! Katy-did!
In the twilight and the dew,
Katy-did-did!
So when fields grew white once more,
All my crops were safe in store—
Ah! she sang with wisdom's lore,
Katy-did—did—did!

NOTE BY AUTHOR—It is the popular belief in rural communities that the "katydid" foretells the coming of the first frost, which will appear in six weeks from the time she begins her song, sometimes during the latter part of July, but more frequently in August.

TREES IN OUR CITIES

TREE-PLANTING in our cities must be undertaken by, or under the direction of, experts. It is found that many varieties of trees will not endure a smoke-laden atmosphere. The maple is one of the poorest of our trees on this account. The Norway maple is proving to be one of the very best fitted for close contact and for dense shade. Our common American linden, or basswood, is another of the best of our natives to be used in parks and streets. It heals its wounds with ease and certainty, and this is one of the chief points in selecting a tree for the city. Its foliage is superb, and the blossoms are the sweetest for the production of honey. It would be an economical venture worth millions to the United States if there was a general movement in our smaller towns and cities to plant linden avenues. The catalpa is another native tree admirably adapted for the street or park. It is healthy, heals its wounds rapidly and easily, and gives great clusters of superb white flowers in May and June. The early flowering variety is the best for our streets. The list must vary in different parts of the country and be modified by the fuel that is used. A sulphur-charged atmosphere, from soft coal, is death to many trees not only in the streets, but in the suburban orchards. Undoubtedly the best success so far in planting city streets has been made under the influence of some well-educated horticulturist. Kansas City is credited with having secured the planting of twelve thousand shade-trees in its municipality in a single year.

MODERN CIVILIZATION IN JAPAN

In his new book on Japan Captain F. Binkley gives the following summary of the wonderful changes that have taken place there within the past half-century:

"When an American squadron arrived to break down her isolation she did not possess even the beginnings of a national fleet or a national army, of an ocean-going mercantile marine, of a telegraphic or postal system, of a newspaper-press, of enlightened codes, of a trained judiciary or of properly organized tribunals of justice; she knew nothing of occidental sciences and philosophies; was a complete stranger to international law and to the usages of diplomacy; had no conception of parliamentary institutions or popular representation, and was divided into a number of feudal principalities, each virtually independent of the other, and all alike untutored in the spirit of nationality or imperialism. In thirty years these conditions were absolutely metamorphosed. Feudalism had been abolished; the whole country united under one administration; the polity of the state placed on a constitutional basis; the people admitted to a share in the government under representative institutions; an absorbing sentiment of patriotism substituted for the narrow local loyalties of rival fiefs; the country intersected with telegraphs and railways, and its remotest districts brought within the circuit of an excellent postal system; the flag of the nation carried to distant countries by a large mercantile marine; a powerful fleet organized, manned by expert seamen, and proved to be as capable of fighting scientifically as of navigating the high seas with marked immunity from mishap; the method of conscription applied to raising a large military force, provided with the best modern weapons and trained according to Western tactics;

the laws recast on the most advanced principles of occidental jurisprudence and embodied in exhaustive codes; provision made for the administration of justice by well-equipped tribunals and an educated judiciary; an extensive system of national education inaugurated, with universities turning out students capable of original research in the sciences and philosophies of the West; the state represented at foreign courts by competent diplomatists; the people supplied with an ample number of journals and periodicals; the foundations of a great manufacturing career laid, and the respect of foreign powers unreservedly won. Such a record may well excite wonder.

THE GREAT-LAKE CITIES

"The story of the development of the industries of the lake region and the growth of interlake commerce is written in the histories of the great cities of commercial and manufacturing importance which line the American shore of all the lakes.

Chicago, the mistress of these inland seas, is the food-market of the world and the commercial center of the American nation.

The Great Lakes have made Buffalo the second city of importance in the Empire State, the greatest point of exchange between rail and water traffic on the globe, and the fourth port of the world in the volume of its tonnage.

They have made Cleveland, near the midshore of Lake Erie, an iron and steel center of manufacture, second only to Pittsburgh.

Detroit, the oldest city on the Lakes, and most closely associated with their history, is also the most beautiful. With nine miles of water frontage and a magnificent city park on one of the large islands in the river, it is even more picturesque in its approaches than Cleveland-on-the-bluffs. It has grown so steadily in commercial importance that its business characteristics now possess a greater interest than either its scenic features or historic localities.

Milwaukee, the second city of importance on Lake Michigan, is the brewing center of the world, but it manufactures more iron than beer, and nearly half as much flour, and does an immense business in meats and leather.

Duluth, the commercial ruler of Lake Superior, has achieved a greatness almost equal to that predicted in the hyperbolic ridicule of Proctor Knott.

Just across the St. Louis River from Duluth, her sister city of West Superior also has large shipyards, and it is there that the whalebacks, the curious craft that look like a huge boiler afloat, are built.—Richard Linthicum, in Ainslee's.

THE PEKIN LIBRARY

The great fires which devastated so large a portion of the city of Peking during the siege of the legation buildings in the summer of 1900 caused a loss to the literature of the world which can be compared to nothing except perhaps the destruction of the great classical library at Alexandria by fire nearly thirteen hundred years ago.

The Hanlin College, an institution so ancient that even tradition has preserved no account of its origin, was completely destroyed, and with it the immense store of books which had been collected through many centuries.

Some of these were in manuscript, and others were rare old copies of the very earliest printed books—and more than a thousand years ago the Chinese could print nearly as well as they do to-day. There was also a very great library of modern volumes, and in many instances the wooden blocks from which these were printed had been preserved along with the books themselves. Hardly a single one escaped the fire.

Particularly unfortunate was the loss of the only remaining copy of a monumental work which the Chinese call the "Yung Lo Ta Tien," or the "Veritable Records," as the words may be translated. This extraordinary compilation makes all our modern encyclopedias appear insignificant in size. It was prepared by order of an emperor of the Ming dynasty, in the early years of the fifteenth century, and two thousand one hundred and sixty-nine scholars are said to have been employed upon the task. The "Veritable Records" included everything of value which had ever been written in Chinese up to the time of its compilation—in the fields of history, philosophy, general literature, science, religion, medicine, art or the handicrafts.

The work was divided into twenty-two thousand eight hundred and seventy-seven sections, and bound in eleven thousand one hundred volumes, which all together contained nine hundred and seventeen thousand four hundred and eighty pages. When it is remembered that the great "Encyclopedia Britannica" contains only about thirty thousand pages, the immense size of this compendium of Chinese learning and literature may be imagined.

More than a century after the original work was completed, two copies of it were made. The original and one of the copies were destroyed at the downfall of the Ming dynasty, in 1644, and now the copy preserved in the Hanlin College has met the same fate.

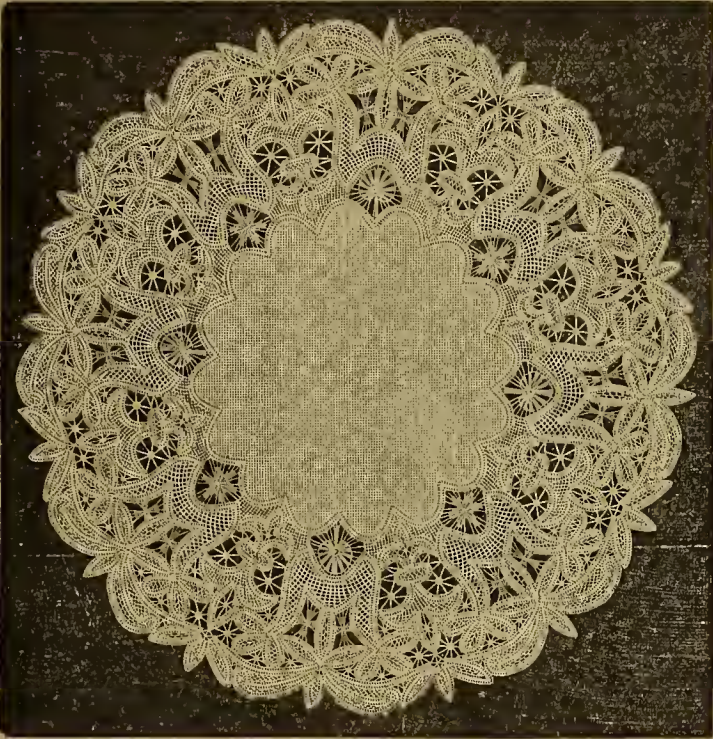
Five volumes only were saved from the flames, and these are now in the possession of Professor Giles, of the University of Cambridge.

It should be added that the allied troops were not responsible for this act of vandalism. The Hanlin College was fired by the Chinese themselves during the disorders of the siege, either through the lawlessness of a riotous mob or else because the scholars, jealous of their venerable and almost sacred storeroom of national literature, preferred to see the books in ashes rather than exposed to the contaminating touch of the foreigner.—The Youth's Companion.

The Housewife

SUGGESTIONS FOR COUNTRY HOSTESSES

GUESTS should be invited for a definite period; the hour of the train should be mentioned in the note of invitation, and a time-table should be inclosed. A hostess should not fail to be at home to greet her guests and offer them a cordial welcome on their arrival. Before their arrival she should make sure that the rooms contain everything for their comfort. A hostess should be careful not to seem indifferent to the enjoyment of her guests, but she should not weary them with attention or give the impression that they are being entertained. She will arrange for their pleasure, secure invitations to enter-



tainments in the neighborhood, and mention to her friends that she expects guests and that they may call if they please. She will not exact that they arise at an unreasonable hour for breakfast, and she will not require that they go to drive when they prefer resting, or to sing or talk when reading may be preferred. The hostess suggests the evening amusements, and joins in them herself. She also proposes the time for retiring, eleven o'clock being the usual hour for saying good-night, although earlier hours are frequently kept in quiet households.—The Delineator.

OUR DUTY TO OUR NEIGHBOR

While we all go to church every Sunday, and many of us think we are quite sanctified and good in so doing how many think of the text, "As ye have done it unto one of these, my little ones, ye have done it unto me?" Is there not some one near you whose burden you can lighten, rather than let your thoughts wander entirely to foreign lands?

A lady, left a widow, with an only son, moved to a city, and bought a home in a settled neighborhood. After living there three months she made the remark that she "wished she were back in the country, as she had never been so lonesome as since she had been in town."

The cheering-up business is one of which the entire stock is not yet taken. Surely the duty near at hand is quite as important as the reaching out for something far away. Form "A Cheering-up Club" among you, and let its influence be far-reaching.

CHRISTIE IRVING.

GINGERED FRUIT

GINGER PEARS.—Peel the pears, weigh, and to seven pounds of the fruit allow three ounces of scraped ginger-root. Put the pears and ginger into a porcelain kettle, cover them with water, and boil until tender. When done take them out carefully upon a platter, and let drain. Strain the liquor, add to it a pound of white sugar for every pound of fruit, and stir it well; beat the white of an egg, drop it in, and skim until the syrup is entirely clear; then add the pears, and boil half an hour, or less if the pears are small. Take up the fruit, put in a jar, and after the syrup has boiled ten minutes longer pour it while hot over the pears. If the pears are very large it is best to halve them; if not, let them remain whole. W. L. TABOR.

BATTENBERG CENTERS

Nothing in the way of fancy work has ever been so popular as the many articles formed of the various linen

braids. The ones given in this issue are particularly attractive. In the round one the great variety of stitches add much to its beauty, especially the palm-leaf fans and fancy stars near the linen. The stitches in the large oval are more simple, and being of the Renaissance braid it does not need such complicated needlework.

MOORISH PICKLES

Have a peck of green tomatoes sliced evenly, and four large, or five small, cauliflowers broken in small pieces; prepare a peck of tiny onions, and another peck of small cucumbers. Cover these vegetables separately, in different dishes, with salt, and pour water over them. In the morning, after they have drained thoroughly, put a layer of tomatoes in a stewpan, then a layer of cauliflower, then a layer of onions, then a layer of cucumbers, and so continue until all have been used. As the layers are being placed sprinkle through them one ounce of ground cloves, one ounce of ground cinnamon and one pound of white mustard-seed. Cover all with vinegar, and boil slowly until tender. Then skin the vegetables out, and put them into jars, and what pickles are left cook in this same vinegar. Then throw out this vinegar, as its strength is about gone by this time, and get new. Take two gallons of cider vinegar, let it come to a boil, and while boiling stir in slowly one pound of ground mustard, one pound of brown sugar, and one half cupful of flour dissolved in a little water. When this new vinegar is boiling well drop all the pickles in, take out again quickly, put in glass jars, and seal tightly.

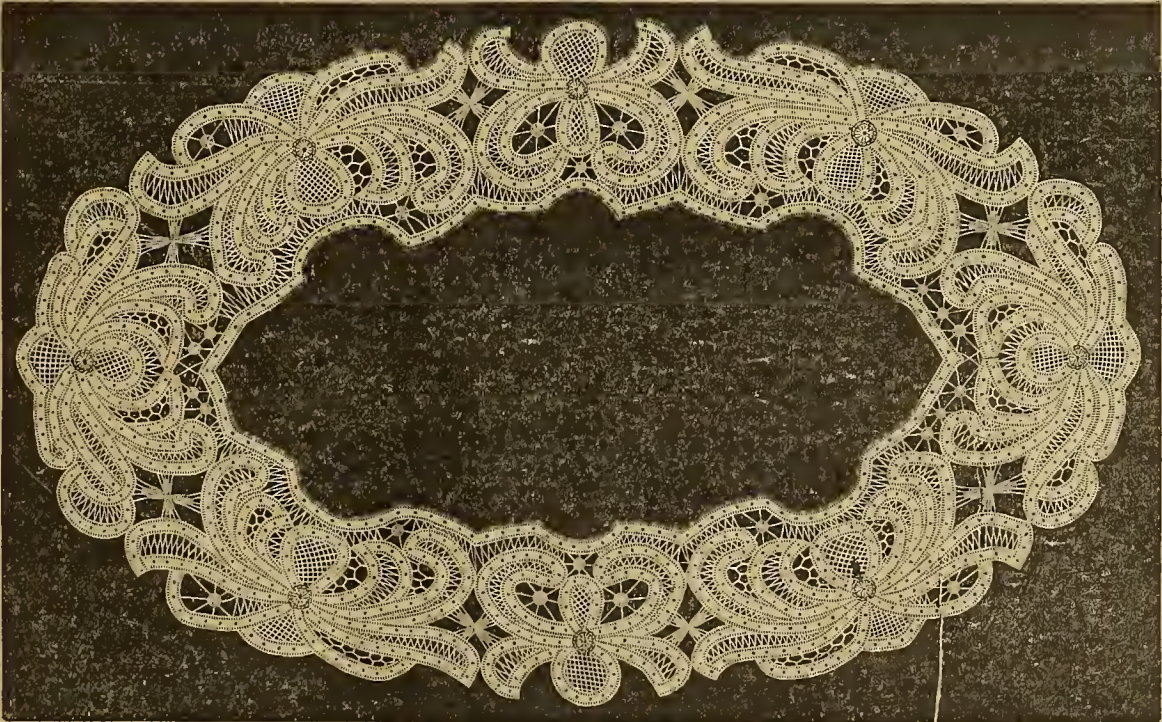
THE KEY TO THE CASTLE OF HAPPINESS

"God broke our years to hours and days that
Hour by hour,
And day by day,
Just going on a little way,
We might be able all along
To keep quite strong.
Should all the weight of life
Be laid across our shoulders, and the future, rife
With woe and struggle, meet us face to face
At just one place,
We could not go;
Our feet would stop; and so
God lays a little on us every day,
And never, I believe, on all the way
Will burdens bear so deep
Or pathways lie so steep
But we can go if, by God's power,
We only bear the burden of the hour."

Before we can find the key to the Castle of Happiness we must lose the key to the Castle of Misery; but before we lose this key we must first lock up in Misery's castle all our disappointments, heartaches, trials, crosses and losses. When these are safely housed we are ready to have the doors bolted so that these miseries cannot escape.

Sir Andrew Clarke, the celebrated English physician, in a lecture to a large body of medical students, summed up the case in these words:

"Try to help your patients to accept things as they are, and not to bother about yesterday, which is gone forever; not to bother to-morrow, which is not theirs, but to take the present day, and make the best of it."



If people who are already sick need these suggestions, how much more do well ones need them!

So few of us are able to do all we would; we plan for so much more than we are able to accomplish. We learn that we cannot keep the pace we have set for ourselves. The onward march finds us lagging in the rear when we should be pushing forward in the van. What matters it? We will do what we can, if not able to do what we would like to do. We must not fret, but remember that "they also serve who only stand and wait." God sees, and knows, and gives his rewards impartially to all who do his will, whether they go to the battle's front or remain and "look after the stuff."

ELLA BARTLETT SIMMONS.



\$12.98 STEEL RANGE

For \$12.98 without reservoir or shelf. \$17.98 with porcelain lined reservoir, high shelf and warming closet, exactly as illustrated, we sell this high grade, big 322-pound steel range, that others advertise and sell at \$25.00 to \$35.00. Hundreds of other big price making surprises in our complete Stove Catalogue, sent free on application. If you want anything in the way of a steel range, cookstove, heater, gasoline or oil stove, we can save you nearly one-half in price. Every stove made in our own foundry. For the most wonderful store prices, complete catalogue and our SPECIAL PAY AFTER RECEIVED OFFER, cut this ad. out and mail to

Sears, Roebuck & Co., CHICAGO.

ENTIRELY NEW

We have just issued the **Twentieth Century Peerless Atlas and Pictorial Gazetteer of All Lands**. Two invaluable reference works in one, and sold at one fourth customary Atlas prices. Official Census of 1900 and 1901 Crop Statistics. New copyrighted Maps. New and brilliantly illustrated Gazetteer. Thoroughly up to date.

Agents Wanted

Sold only through agents and guaranteed the finest seller on the market. Enables agents to double the best profits they ever made before. Contains 170 mammoth pages, size 14 by 11 inches. 340 Colored Maps and beautiful and strictly representative illustrations. Extra liberal terms to agents. **THE CROWELL PUBLISHING CO., Springfield, Ohio**

Banner Lye

The best help in cleaning household and farm utensils. Makes pure soap without boiling.

NOW IS THE TIME

\$1,500.00 Cash Given Away

Read how to win one of the great prizes. Full particulars on Page 19 of this issue of the Farm and Fireside.

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With Complete Assortment of Fine Needles



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The eye is so shaped as to be threaded with the greatest ease, has no sharp edge to cut the thread. Another valuable feature is a groove-shape given to the end of each needle at the eye, so that the thread will follow the needle through any cloth, heavy or light, without the slightest strain. Order as No. 122.

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Address **FARM AND FIRESIDE**, Springfield, Ohio

IF EVERY farm-yard were what it might be this broad land of ours would blossom into surprising beauty; if every farmer would devote one week out of the fifty-two to the planning, planting and care of his dooryard the farm homes of America would become models of taste and outdoor comfort.

The average American farmer, however, seems to think more of the back pasture-lot than he does of the front pleasure-lot; he seems to give more thought to dollars than to dooryards, to dairy-cows than to daily comfort. It's a habit of his, of course. Shall I call it a bad habit or simply an American habit?

But—fortunately—habits, like fashions, are subject to change. As the country settles up and the pioneer phase of farm-life disappears the love of beauty—which lies deep in every human heart—asserts itself. Sooner or later one or two farmers in every community feel a longing to "slick up things a bit." At first their efforts are regarded with mild surprise and ridicule by the neighbors.

"What do you think!" says Mandy Jones to her husband. "Hank Peters has bought a lawn-mower, and he's going to cut the grass in his yard once a week!"

"You don't say! Think of the good hay he will lose!"

"And all the bother he's making himself!" adds Mandy Jones.

Then the honest couple look at each other with commiserating smiles, which—luckily—Hank Peters does not see or dream of.

But as the weeks go by gradually a change comes over these compassionate ones. Hank Peters' lawn begins to look so smooth and velvety, so surprisingly attractive, that neighborly antipathy gives place to desire.

"Why can't we make our yard look like that?" asks Mandy Jones.

"We'd lose the—the hay," replies her husband, feebly.

"Well, ain't there hay enough in the meadow? Let's get a lawn-mower, and show folks that our yard is just as pretty as anybody's."

"Say, Tom," says Mrs. Pepperton to her husband a week or so later, "the Jones have gone and bought a lawn-mower, too!"

"You don't say!"

"Yes; and their yard looks twice as pretty as it did. It's no prettier than ours would be, though, if—"

Tasty, Cozy Farm-Yards

By WALTER E. ANDREWS

Sure enough, there was Hank Peters at work in his back yard. Mr. Jones could not believe his eyes.

"Sho-o-o!" he whistles again, in a louder tone.

In another month there are several other gravel

of the whole neighborhood.

"All sentiment," you say? Well, there's a practical side, too. There is hardly a month in the summer that does not bring to Hank Peters an offer from

some prospective buyer "who was passing and took a fancy to the place." Some of the offers have been very tempting. Mr. Peters has no idea of parting with his farm; but if he ever does want to sell it, the price that it will bring will surprise the township, and will repay a hundred times over the time and effort expended upon the house and yard.

SHORT LINES

—We are shaped and fashioned by what we love.—Goethe.

—If you know how to spend less than you get, you have the philosopher's stone.—Franklin.

—Skill to do comes by doing, knowledge comes by eyes always open and working hands; and there is no knowledge that is not power.—Emerson.



PART OF THE FRONT YARD

walks in the neighborhood, and, strange to relate, one of them is in the Jones' yard. How it got there is a problem in domestic economy which only Mandy Jones can explain. I merely state the fact.

And during that same month the local nurseryman does a surprising amount of business among an unexpected class of customers.

"Why," says he to a town friend, confidentially, "the neighbors out around Hank Peters' place are buying roses and vines and trees to beat the band! I don't see what's come over 'em all of a sudden!"

Another year flies by. A grape-arbor and a summer-house come into being on the Peters' house-lot.

When Mandy Jones first saw these luxuries she almost dropped a tray filled with dishes. What Mr. Jones did when he first heard the news is an unknown bit

of local history. What he said is unknown, also. But it wasn't so very long—not later than the following summer—before he was pointing out his own vine-clad summer-house to admiring visitors.

"Yes, siree!" he would say, with pride, "we farmers have all the luxuries going! We're keeping up with the times, we are! Look at that shady arbor, now! Fine place for Mandy to sit and sew on hot days, and for the children to play in—eh?"

I might continue this narrative indefinitely, but enough is enough. If you, my dear madam, or you, my dear sir, do not see the point now, I fear that a volume would fail to make it more clear.

The accompanying photo-engravings show glimpses of some of the results achieved by a Michigan farmer, who bashfully poses in this article as Hank Peters. He's just a common, every-day-sort-of fellow. He has no more

Oh for a brooke and shady nooke,
Eyther in-a-doore or out;
With the greene leaves whispering overhede,
Or the streete cry all about.
Where I maie reade all at my ease,
Both of the newe and olde;
For a jollie goode booke whereon to looke
Is better to me than golde.

—Old English Song.

THE QUIET LIFE

Happy the man whose wish and care
A few paternal acres bound,
Content to breathe his native air
In his own ground.

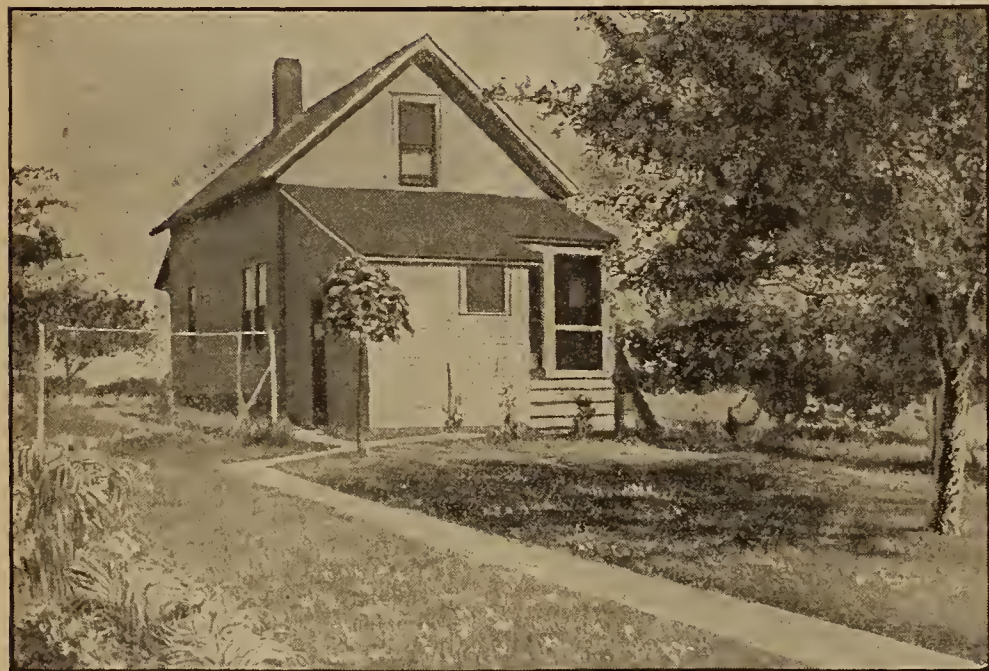
Whose herds with milk, whose fields with bread,
Whose flocks supply him with attire;
Whose trees in summer yield him shade,
In winter, fire.

Blest, who can unconcern'dly find
Hours, days and years slide soft away
In health of body, peace of mind,
Quiet by day,

Sound sleep by night; study and ease
Together mixed; sweet recreation,
And innocence, which most does please
With meditation.

Thus let me live, unseen, unknown;
Thus unlamented let me die;
Steal from the world, and not a stone
Tell where I lie.

—Alexander Pope.



HANK PETERS' BACK YARD

The next time Deacon Pepperton goes to town a third lawn-mower is added to the neighborhood gossip.

And so it goes. One improvement leads to another; one example lights the fire of aspiration in some other heart; one right start makes many similar beginnings.

The next year Mandy Jones wakes to the fact that Hank Peters is making a gravel walk and driveway.

"Plain dirt is good enough for me to walk on!" she exclaims to her husband.

"For me, too! I haven't got time to be hanting and fussing with gravel. Hank's getting too tony for this neighborhood."

"And he's planting roses and climbing vines, and shade-trees, and fruit-trees, and a hedge alongside the driveway—and I don't know what all," continues she, excitedly.

"Let him!" snorts her husband. "Sensible folks don't spend good dollars for such foolishness! At least I don't!"

Unconscious of criticism, the work of adornment goes on in the Peters' yard.

"Well, I never!" exclaims Mandy Jones one morning, as she gazes out of the window toward the Peters' homestead.

"What's the matter now?" asks Mr. Jones.

"Why, that Hank Peters is planting flowers and putting a gravel walk in the back yard! Who ever heard of such a thing? The first thing you know he'll be setting rose-bushes in the pasture-lot!"

"Sho-o!" whistles her husband, going to the window to verify the strange announcement.



GRAPE ARBOR AND SHADY SWING

BE THOUGHTFUL

"How is your mother?" The question was asked of a young lady who had come to spend the day with friends. She looked so sweet and cool in her dainty dainty—it was an oppressively warm day—that her friends were almost inclined to be envious.

"Mama is not at all well lately. No, thank you; I don't need a fan, I am very comfortable. I feel quite worried about mama."

"Why didn't you bring her with you? This country air would do her a world of good."

"She is ironing to-day. Mama has such big ironings, especially in the summer. Then, as you know, I am going to the sea-shore soon, and mama is busy sewing for me. I have several dresses to be made, besides numerous other frills and furbelows."

While she proceeded to enthusiastically describe the fashions her friends were busy with their thoughts. And—there is no need to point a moral to this true little tale; but, girls, listen: Some day those worn, needle-pricked hands that have so willingly worked for you will be crossed quietly upon her breast—perhaps sooner than they should have been. You cannot help her then. Tears, heartaches and regrets will be of no avail.

Lighten mother's cares and burdens to-day, daughters; it may be too late to-morrow, and she may have passed beyond your reach.—Epworth Herald.

THE WHISTLER'S RIGHTS

Etiquette in street-cars is a very underterminate quantity. Whether a man should give up his seat to all women on all occasions, or to old women, or to pretty women, or to tired women, or to women with luggage or babies, or to no women, or to old gentlemen has been discussed "ad libitum." Despite the argument that a tired man is as tired as a tired woman, there are still those who rise to give others the preference. Questions of etiquette are not easily settled. Recently two men, unknown to each other, were standing side by side on the platform of a street-car. One was whistling vigorously so close to the ear of the other that the other cast frequent glances of annoyance in the direction from which the sound came, and shrugged his shoulders with evident discomfort. For a long while the whistler exercised his whistle without restraint, appearing not to notice the annoyed glances directed toward him. When he had finished off "Rip Van Winkle was a lucky man" with shrill, exultant bravado, he turned upon his neighbor and said, "You don't seem to like my whistling!"

"No," came the frank answer of a man well known to the world of readers, "I don't."

"Maybe you think you are man enough to stop it."

"No," was the reply, "but I hope you are."—The Great Round World.

Sunday Reading

STARBEAMS

BY SARA ELIZABETH GRAVES

Swinging, swinging, through the spaces
Of the midnight dark and dim,
In the shadowy deeps above us,
Round the broad horizon's rim;
Lamps set low in heaven's windows,
Glints of gold in ebon night,
Ruby, amethyst and sapphire,
Golden, flame and emerald light.
Everywhere these orbs celestial
Glowing stars of glory shine—
Their commission to illumine
Earth's dark shadows—yours and mine.

One star differeth from another,
Yet each to itself is true;
One must be the star of morning,
Others flash from twilight blue.
Alyone boasts not her greatness,
Though she sways her sisters all,
Each obeys its changeless orbit,
Some must rise, while others fall.
Just the same in all the ages
Glowing stars of glory shine—
Their commission to illumine
Earth's dark shadows—yours and mine.

THE REWARD OF SERVICE

Many a man eager for honor has striven by devious ways to secure it, only to find himself dishonored at the end; while others, putting aside all thought of fame, and taking a lowly place, have been invited by the Master to a higher seat, and have attained honor with men and God. "If any man will serve me, him will my Father honor," said Christ.

In an address at Northfield during the recent conference Dr. Henry C. Maibie, of the Missionary Union, told this incident illustrating the reward of self-sacrifice:

"How does this law of self-sacrifice work in America? In Sherman's campaign it became necessary, in the opinion of the leader, to change commanders. O. O. Howard was promoted to lead a division which had been under the command of another general. Howard went through the campaign at the head of the division, and on to Washington to take part in the last 'Grand Review.' The night before the veterans were to march down Pennsylvania

Avenue General Sherman sent for General Howard, and said to him, 'Howard, the politicians and the friends of the man whom you succeeded are bound that he shall ride at the head of his old corps, and I want you to help me out.'

"But it is my command," said Howard, 'and I am entitled to ride at its head.'

"Of course you are," said Sherman. 'You led them through Georgia and the Carolinas, but, Howard, you are a Christian.'

"What do you mean?" replied Howard. 'If you put it on that ground it changes the whole business. What do you mean, General Sherman?'

"I mean that you can stand the disappointment. You are a Christian.'

"Putting it on that ground," said Howard, 'there is but one answer. Let him ride at the head of the corps.'

"Yes, let him have the honor," added Sherman; 'but, Howard, you will report to me at nine o'clock, and ride by my side at the head of the whole army.' In vain Howard protested, but Sherman said, gently but authoritatively, 'You are under my orders.'

"When the bugle sounded the next morning Howard was found trembling like a leaf, and it required another order from General Sherman before he was willing to take the place assigned to him. He had, as a Christian, yielded the place to another which rightly belonged to him, and in this grand review, found himself not at the head of the corps, but at the head of the army. Even worldly men know where Christians should be who have offered their lives in self-sacrifice for others."—The Christian.

SWEETEN LIFE WITH SENTIMENT

Commenting on Joseph's journey to meet his father, when the old man was coming down to Egypt in the time of famine, Dr. Joseph Parker said:

"Yes, I do not care what our duties are, we can add a little pathos to them if we like; whatever be our lot we can add a little sentiment to our life. And what is life without sentiment? What are the flowers without an occasional sprinkling of dew? It may be a grand thing to sit on a high stool and wait till the old man comes up-stairs. But it is an infinitely grander thing, a 'lordlier chivalry,' to come off the stool and go away to meet him a mile or two on the road. Your home will be a better home—I do not care how poor the cot—if you have a little sentiment in you, a little tenderness and nice feeling. These are things that sweeten life. I do not want a man to wait until there is an earthquake in order that he may call, and say, 'How do you do?' I do not want a man to do earthquakes for me. Sometimes I want a chair handed, and a door opened, and a kind pressure of the hand, and a gentle word. And as for the earthquakes, why—wait until they come!"

The Family Physician

By ROBERT B. HOUSE, M.D.

COLD WATER WITHOUT ICE

IT FREQUENTLY happens that ice cannot be obtained for use in the sick-room. In such an event it is only necessary to procure a pitcher of cold water and place about it a towel soaked in a solution composed of two ounces of ammonium nitrate and one pint of water. In a very short time—about half an hour—very cold water will be on hand ready for immediate use.

TO GUARD AGAINST THE BITE OF THE MOSQUITO

McIntosh, in the "Medical Record" of November 16, 1901, recommends an application for this purpose which he has used for some years when out fishing or hunting in swamps where mosquitoes are prevalent, and in the evenings when sitting outdoors, and which he has found to be most excellent and efficient; it is the oil of citronella (oil of verbena, Indian melissa-oil). It has a very pleasant odor, and is not expensive. The oil should be rubbed into the exposed parts, and repeated occasionally, or the following is quite as efficient—oil of citronella, one ounce; alcohol, one ounce. Apply this quite generously to the face, hands, neck and ankles to prevent mosquitoes from biting.

INGROWING TOE-NAIL

For that very painful affection, ingrowing toe-nail, the following treatment is very strongly recommended:

1. Remove all pressure from the nail by cutting away a piece of the shoe.
2. Disinfect with hydrogen dioxide until no more "foam" appears.
3. Apply a drop of strong solution of cocaine in the base of the ulcer.
4. Apply a drop of Monsell's solution to the ulcer, then cover loosely with gauze. Repeat this process every second day until the edge of the nail is released by the retraction of the hypertrophied tissue. The patient suffers no pain from the application, and all pain has disappeared the second day following the application. The cure is effected in a week or two without the least inconvenience or interference with business.—Dietetic and Hygienic Gazette.

SMALLPOX EPIDEMICS

Epidemics of smallpox are reported in various sections of the country, and their spread is claimed to be due not only to errors in diagnosis by physicians, but to a growing opposition to vaccination, which has been aroused by reports of tetanus resulting therefrom. This opposition has been fanned to a certain extent by circulars which have been issued by those in the employ of commercial houses endeavoring to throw discredit on the vaccine of other houses. We have nothing to do with the quarrels of vaccine-producers, but we do not approve of methods which throw discredit on the benefits to be derived from vaccination, as has been done by the issuance of these circulars by individuals who have some score to pay off or for the gratification of some pique. If vaccine protects—and we are inclined to believe that it does protect—it should have the chance to be practised, and nothing but the purest product should be used and the operation performed carefully and in the most aseptic manner.

The Family Lawyer

By JUDGE WM. M. ROCKEL

Legal inquiries of general interest from our regular subscribers will be answered in this department free of charge. Querists desiring an immediate answer by mail should remit one dollar, addressed "Law Department," this office.

HEIRS UNDER THE LAW.—H. G., New York, asks: "If a woman dies, leaving property in New York State, to whom would the property go, supposing she should have as heirs a husband and a son more than twenty-one years of age?" Under the laws of New York, where no will is made, as to the real estate the husband would have a life estate in it, the remainder in fee simple to the son; as to personal property the surviving husband would get one third absolutely, and the son the remaining two thirds.

INHERITANCE.—O. W. K., Ohio, inquires: "If a man dies in the state of Kansas, leaving a widow and child by his second marriage, and children by his first wife, how should property be divided—both real and personal—between the widow and children? There being no will, can the widow will to whom she pleases what the law gives her?" In Kansas real estate and personal property are distributed in the same manner. The homestead is absolutely the property of the widow and children, one half in value to the widow, and the other half to the children. It cannot be divided until the youngest child arrives of age. One half of the estate goes to the widow, the remaining half to the children. The widow can will or dispose as she wishes of that which goes to her.

LEGAL HEIRS.—M. K., Pennsylvania, asks: "If a woman dies, leaving furniture bought with money willed her by a sister, who will be the lawful heirs—her children or her husband? Is a will legal that is written and signed by the testator without witnesses?" The personal property of the deceased widow is distributed as follows: The surviving husband, if there be children, takes an equal share with the child, and if no children he takes all. If there is no surviving husband, father or mother, then the personal property is divided equally among the brothers and sisters of the deceased person. In Pennsylvania wills must be proved by two witnesses, but they need not be subscribing witnesses, and no acknowledgment by the testator before them is necessary except in the case of a bequest to a charitable institution.

INHERITANCE.—C. B. W., South Dakota, writes: "A owns a farm in the state of Wisconsin, and dies, leaving a widow and children, but no will. Can the widow hold personal property? What share do the children get?" By the law of Wisconsin the real estate descends equally to the children, the widow having a dower (a life estate) in one third of the lands of her husband. Out of the personal property the widow is allowed all her apparel, ornaments, and all wearing-apparel and ornaments of the deceased, homestead furniture not exceeding two hundred and fifty dollars, and other personal property, to be selected by her, not exceeding two hundred dollars in value. The widow and minor children constituting the family of the deceased person should have such reasonable allowance out of the personal estate as the county court shall judge necessary for their maintenance during the progress of the settlement of the estate.

CHAPTER II.—CONTINUED

"I wish to de Lawd you'd shet up."

Sylvia outside her cottage door paused in surprise at Clarissy's tones mingled with the troubled fretting of a child.

"Yere—take dis tater, an' hush. Now you hol' it by dat straw, an' don' you mess up Miss Sylvy's flo'. If I had yo' fool ma yere 'bout two minits I'd learn her how to dump her trash down on the quality."

Sylvia stepped inside the door. Wee Charlie, with disconsolate face, sat on the floor eating a potato, through which a stout broom-straw had been thrust in the interest of cleanliness, and standing over him, with ineffable disgust in her face, was Aunt Clarissy.

"Well, Aunt Clarissy, what in the world is the matter?"

"Plenty de matter. Dat Milly Burns fotch dis chile yere yistiddy, an' lef' him when I was out huntin' aigs, an' now de folks say dat she has runned away somewhar! De 'thorities—dey come yere befo' day, an' tuck off Tim Burns an' de Perkinses an' de Hughes, an' busted up a big still out yander in de swamp!"

"Why, things have been happening!" exclaimed Sylvia.

"An' dat ain't all." Clarissy went a step nearer, and dropped her voice. "Dem Bassett chillun 'low dat you is de one what 'ported on de stills—dat it wuz yo' bizness when you went off yistiddy. Now, dem chillun didn't make dat up, dey heard somebody a-talkin' it, an' I tell you, Miss Sylvy, honey, dere's no tellin' what gwine happen to we-all if we don' git way from dis buzzard-roost!"

"Supper must happen right now," said Sylvia, with more calmness than she felt. "I am as hungry as I can be." She cast a troubled glance at the child. "You say Milly left him without a word?"

"She sho' did, an' she fotch his clothes an' dis paper." She handed Sylvia a bit of crumpled paper. It was covered with childish-printed letters, and Sylvia sat down and patiently deciphered it. It told a pitiful story—a young and pretty woman, craving Life's luxuries, had gone to seek them. The child was an incubance, so she left him, and in the hint of a wild quarrel with her husband Sylvia, reading between the lines, came to a quick conclusion as to the identity of the informer.

For the first time in her short life she felt daunted, discouraged, and as she sat on the little stoop in the gathering twilight, soothing the still unweaned child to sleep, strange, unwonted tears gathered in her eyes.

"Oh, the mischief I have done in my blindness!" she cried. "I meant to help them, and have done nothing but sow discontent! What was wrong?" She laid the sleeping baby on her own white bed, and after her simple meal went back to the stoop, still asking herself the question. There in the silence and darkness she sat thinking, wondering, till at last the answer to her soul's question came to her as clearly as though a voice from above had spoken it, and she understood once for all that human strength alone was too puny a force to be pitted against such ignorance and degradation as that at The Bend.

"I'll go away to-morrow!" she cried, impulsively. "It will take a revolution in sober earnest to help matters here, and revolutions are for fanatics to head! I can find something to do more nearly in my province!"

The moon had risen as she sat in her troubled reverie, and as she rose to go inside the beauty of the night tempted her to linger. She stood tall and fair on the doorstep, her loose white wrapper clinging softly about her and making her seem a very part of the moonlight and mystery.

It may have been her nearness to the Great Beyond which gave her for a moment such wonderful spiritual vision, but as she stood there, looking out over The Bend, a swift picture swept before her weary eyes—a picture of peace and happiness and prosperity reigning over that miserable corner of the world.

She raised her head in the first real prayer she had ever known—an unexpressed yearning of a great untamed soul—and in a moment the shots rang out, and Sylvia fell heavily to the ground.

"Oh, God! Man, do you hear that? We are too late!" The two men leaned forward over their horses' necks, and spurred forward, leaving far behind the blubbery boy who of his own accord had stolen away and ridden to Sedgwick, hoping to find Sylvia there, and warn her, not knowing that she had already come back to the cottage.

There was not a sound nor a light in any of the squalid huts as Tom and Doctor Armitage rode past, but as they came nearer they heard Clarissy wailing, and found her bending over the white-robed figure.

They lifted Sylvia gently, and carried her into the house. Doctor Armitage bent his head close to her heart. "Not dead," he said, shortly, "but something will have to be done quickly. I will watch, and you must bring your surgeon here. Now hurry!"

Tom lingered but a second for a look into that quiet, pale face, and bent as if to kiss her; but that imperious dignity which was Sylvia's birthright still forbade, and with breaking heart he turned slowly away, weeping like a child.

CHAPTER III.

Wild excitement prevailed at The Bend. Two tents were pitched in front of the little white cottage, and a uniformed nurse, who had come with Doc-

A Reflex Influence

By SUSIE BOUCHELLE WIGHT

tor Waybrook from the city, passed to and fro. The physicians scarcely stirred from the side of the unconscious girl, and Tom Channing and Miss Mary waited in miserable silence. Miss Stasia was the embodiment of grief. Every rub between Sylvia and herself was forgotten, and she did not once refer to her prophecies of evil. In a meek way, which seemed unspeakably sad and strange to Tom and Miss Mary, she took charge of the housekeeping—looking after everybody's comfort, directing Clarissy's work; and her unwonted gentleness extended even to poor little Charlie, that bit of flotsam left stranded on their hands.

The presence of so many strangers added to the recent seizure of the stills was enough of itself to cause a sensation at The Bend, but there was another and greater cause. The news of the attack on Sylvia had spread like wild-fire over the county, arousing a spirit of chivalrous indignation in the souls of its men. Hog-stealing and illicit distilling were bad enough, and Smoky Bend had long been the dark corner of that section, but when it came to shooting down a woman, whether she had been informer or not, the time had come for action. So a great body of men, many of whom had never heard the word "chivalry," rode to The Bend prepared to hold every man there responsible unless the actual perpetrator was found and given up. And thus it is sometimes that evils may go on unhindered for years, doing violence to the sense of right of a whole community—unhindered, because a prosaic wrong is everybody's business, and so nobody's; but let something touch that finer feeling of men, however dormant it may seem, that sense of strength and its responsibility to weakness, and they are up in arms in a moment.

When the mob arrived at The Bend, however, not a man was to be found. A bird of the air had whispered to them, and they silently and swiftly disappeared into the swamp, every nook and hiding-place of which was as familiar to them as the highroad. They left their families to shift for themselves while they slipped away and over into Alabama, until the atmosphere should have time to clear, for these rough men were philosophers enough to know that the sentiment which actuates a mob is at best an evanescent one.

The women and children were in a state of terror so long as the crowd of men waited sullenly to learn the surgeon's verdict as to Sylvia's condition, for a placard was nailed to the store door, announcing that in case of her death every house there would be leveled to the ground, and The Bend destroyed forever.

At last the news came that she would live, and the men went reluctantly away; but the placard remained, for nobody dared to interfere with it. Doctor Armitage remained, at the request of Tom and the two old ladies, and with him and the trained nurse Sylvia was as well cared for in her tedious recovery as if she had been in Doctor Waybrook's pet hospital. After a time one may grow accustomed to almost any thought, and so after those first terrible days of uncertainty and dread life at the cottage settled down into something of a routine—a routine in no way disturbed by Sylvia, who lay very still and quiet, speaking little, but looking at one with eyes strangely calm, except when they fell upon Miss Stasia, when they took on a look of pathetic appeal, which was not hard to interpret as the others recalled the old lady's steady opposition to Sylvia's residence at The Bend.

The news of anything out of the ordinary—a death, sickness or marriage—among this class of people always calls for an assembling of the clans, and just now The Bend was more prominently in the public eye than it had ever been before. The various ramifications of the various families came in crowds to visit their relations, to hear the story many times repeated, to wonder, exclaim and condole, and incidentally to eat them out of the houses and homes which precariously sheltered them! They were alike in their characteristics, all these people, and Tom and Doctor Armitage watching them as they sat or strolled about saw them in a new light, though both had been used to "po' white trash" and their ways all their lives.

"Poor Sylvia was right," said Tom. "There is more definite missionary-work needed. Our church sends its preachers all through this section, but somehow these people are like those who have ears and hear not. This looks almost like a camp-meeting, does it not?"

"Yes," replied Doctor Armitage; "and I do not see why we should not make a virtue of a necessity, and make this gathering one in truth." They were looking at the various rigs hitched to the trees and bushes—shackly old buggies, wagons, carts and oxen and mules. "Miss Farrar tried living among them to apparently little purpose, but I fancy that if there had been a combination of her white life and some clear Christian teaching the results would have been different. Suppose you try to add the complementary work?"

After thinking it over, Tom decided that his friend had suggested just the thing which ought to be done. So they erected a rough stand, and contrived benches, and began in a small way that great revival from which the country people reckoned time for years

afterward—"the big meetin' down on Coon Creek."

At the first service the faint sound of singing came to Sylvia's ears. Rousing up in her bed, she strained her ears to listen. It was "There is a Fountain Filled with Blood" led by two strong, manly young voices, and augmented to-

ward the last by a few straggling trebles.

"What is it?" asked Sylvia.

"Only Mr. Channing and Doctor Armitage holding preaching services with the people," replied the nurse. "Does it disturb you?"

"Oh, no; I am so glad!" said Sylvia, and closed her eyes again.

"Tommy," she said when he came in for his next little visit, "I am so glad you are preaching to them; but remember, make it very, very plain, like you were telling it to very little children! They are like I was; they hear and hear, but they cannot understand that it is so simple a thing."

At the word "was" Tom's eyes met his friend's, on the other side of the bed, and they understood that look of peace, and each recalled that founder of their faith, John Wesley, who wrote in his journal, "I came across the ocean to convert the Indians, and found, alas, that I was not converted myself!"

"And Tommy," she continued, "preach Christ hard to them. I left him out, and I failed."

They had heard preaching all their lives, but yet none like this—so simple, so direct, so compelling—and the throngs of people, which daily grew larger, were swept by a mighty wave of feeling. Hardened derelicts from other revivals some of them were, and others were chronic church-going shouters and everyday sinners, while very many were of the indolent, careless sort like The Bend folks themselves, to whom this beautiful gospel gave a fleeting glimpse of a life larger than they had ever dreamed.

One evening, just after dark, a pitiful figure came slipping into The Bend, hiding from any possible watchers and crouching behind the trees. A pitiful, white-faced little woman in a cheap silk gown all draggled and soiled—poor little Milly, ignorant and sin-stained, yet close akin to all sweet, pure womanhood by the yearning mother-love which was tugging at her heart, the fierce hunger to see her forsaken child. She never had doubted that she was well known to have been the informer, and she was afraid to face The Bend people. She had been in the city ever since she went away, and though she knew the risk to herself, she had no power to resist that which had driven her to try to get her baby back again. When she reached Sylvia's cottage all was so still that she stole unobserved to the back of the house, and then crept around till she could look into the open window. Her eyes widened for an instant when she saw Sylvia propped up on pillows, and a strange woman fanning her gently; but she scarcely paused there a moment, for a glance told her that Charlie was not there. Some strange prescience kept her from doubting that he was in the house, so she slipped softly along and peeped into the shed-room. Ah, there he was! She almost flew to him, and catching him up, with the light bedclothes hanging to him, she fled back into the shadows of the thick trees. She ran on through the darkness, stumbling now and then as her foot caught in the underbrush, but all the while raining kisses on the baby's face. He awoke, and made as if to cry; but she spoke to him, and he remembered her voice, and with a sleepy little satisfied grunt he snuggled closer to her and went back to sleep.

In an instant a great blaze lighted up the forest, and Milly, astonished, sank down in the midst of a thick clump of gallberry-bushes. The light increased as other fires were kindled, and peering cautiously out she saw that she was very near to what some dim childhood memory told her was a preaching-arbor, and that people were gathering rapidly from every direction. There was no chance for her to get away now till all was dark again, for although the bushes made a thick screen around her, the light was bright all around. She crouched low and waited, hushing the baby gently as he stirred at the sound of the singing, and listening because she could not help hearing. Tom Channing was preaching; and if he had chosen his words especially for her—perhaps the words were put in his mouth for her—they could not have sunk deeper into the heart of his hidden listener. It was as though she had never heard The Word before, it came to her with such a wonderful new meaning, and she almost forgot that she was hiding as she edged nearer and nearer to the outer fringe of bushes. When Tom began to point out the steps to salvation, repentance, confession and restitution, she rose slowly, as if in a dream, and still cradling the sleeping child in her arms she walked to where she could look into the preacher's face. He went on to tell of the matchless love of the Savior, and of his longing for the sinner to come to him with every sorrow, for comfort, and how he would fill every unsatisfied heart. Milly still gazed, with all her loneliness and hunger written in every line of her young face. The people looked at her a little curiously at first; but they, too, were under the spell of the preaching, and so forgot her directly. Perhaps if they had suspected her of having been the informer they would have paid more attention; but they did not doubt that Sylvia was the one, for she had never denied it. Milly stood up until some woman made room on the bench and pulled her down beside her. Her interest was so intense, however, that it was painful.

[TO BE CONTINUED]

THE old Crotty house faced the highway with an air of triumph. Resplendent in its fresh coat of white paint and the new green blinds it looked so cool and inviting in the shade of the great elms, each girdled with circular seats for the repose of the weary, that many an occupant of the handsome equipages from the summer resort four miles away, rolling past on the pleasant country road, looked back wistfully at the simple charm of the ancient homestead, so indicative of rest and comfort, and said, sighingly, as they thought of the crowd and confusion at the big hotel, "What a pretty place!"

"Stop your horses, John. I am going to investigate this," cried Miss Knox. "It's a regular bower, Uncle. Just look at those roses! I am going to sit down on that seat if I never do another thing. Will you get out, Uncle?"

"I think not, my dear. I'm quite comfortable as it is," smiled the white-haired man, as the driver, with a trace of amusement on his solemn visage, reigned up his horses.

This was the fourth time in an hour that Adele had halted him for purposes of investigation—once to look in a brook to see if there were any fish there, once to pat a calf, once to kiss a small feminine study in rosy cheeks and berry-stains, and now to sit under a tree. No wonder John looked at his watch with an anxious expression, and glanced rather reproachfully at Doctor Freeland, as the pretty, spoiled girl tripped down the nicely trimmed, gravel driveway, and dusting her little feet on the soft, green grass, deposited her graceful figure on the green bench, entirely regardless of the fact that John had another engagement at five o'clock.

The Doctor laughed indulgently. "We will get back in time, I think," he said. "Miss Knox is new to these country sights. She will not stay long, driver."

The side door of the house opened, and Prudence Crotty appeared with a pitcher and glass. She was a very tall woman, with a long, kind, serious face, and smooth gray hair brushed sleekly in two shining curves upon her high forehead, to terminate in a hard little knot at the back.

Viewing Mrs. Crotty from behind one would have pronounced the straight, erect figure that of a woman of forty, but her face bore the lines of sixty years. Her wide, gray eyes peered searchingly through steel-bowed spectacles as she marched out to where Adele Knox sat.

"Perhaps the young lady would like a drink of our spring-water?" she observed. "It is a warm day."

"I'm just dying for one," replied the girl. "I'm going to drink three glasses. Sit down by me, won't you, and tell me about this lovely place?"

Mrs. Crotty looked surprised, but smiled in a pleased way, and sat down. "The place does look nice, doesn't it?" she remarked.

"It's a rapture. I wish I could stay here," cried Miss Knox, sipping the cold water with appreciative sighs.

"I wish you could—you can if you want to," answered Prudence, laughing, in her solemn way. "There is plenty of room."

The watchers in the carriage under the shade of the maples beheld earnest discussion going on for the next few minutes, accentuated by many gestures and energetic bobs of the bright head in the shade hat, and bows and nods of deep import from Mrs. Crotty.

"They're goin' into the house, sir," announced John, dolefully, looking at his watch again.

Sure enough, the pair, still talking rapidly, were disappearing behind the vines on the side porch.

"Well, well," said the Doctor, "what is going on? I must hurry my young lady up. If she isn't here in five minutes I will go after her."

He sat waiting, with some impatience, and was about to go in search of his uncertain niece when she came rushing out, and flew to the carriage in great excitement.

"She'll take us, Uncle—there are two splendid rooms—no other boarders—only ten dollars a week apiece! I told her we would be over in the morning! It's the loveliest place! Let's go back and pack up! Turn, around, John!" she rattled, as she hopped in.

Waving a good-by to Prudence, who stood nodding and beaming on the steps, the animated Miss Knox seized her dignified relative by the neck, and kissed him vigorously. "Isn't it grand!" she cried.

It was some moments before the good old physician really took in the situation, and they had covered several rods, as John had lost no time.

"You crazy child!" he gasped finally, "what have you done?"

"Engaged board for two weeks—then some other people are coming," said Adele, triumphantly. "We will have to leave then, you know. I'm sick of the hotel, and Mr. Woodford hanging around. I want to be right out in the country, and not have to dress up. Think of it, Uncle; they have cows and sheep and pigs, and there's a brook in the meadow. I shall love it!" Her eyes were dancing, and she squeezed the Doctor's hand ecstatically. "And a cat with five kittens!" she added as a finishing stroke to the attractions of the Crotty farm.

"But, my dear," said her uncle, appalled at the prospect, "I have engaged rooms at the hotel for a month."

"Give them up!" observed Miss Knox, calmly. "That is easy. We will have a much better time at the farm."

Over the Fence

By ELLIOT WALKER

The Doctor sighed. His present quarters suited him very well, and he liked plenty of society. Domestic animals did not appeal to him. It would probably cost him something to arrange matters with the hotel people. It was ridiculous.

But there was Adele. No doubt it would be better for her. She had never visited the New England hills before, and the wild, wholesome life affected her strongly. He had urged her to try the mountains instead of the beach, as usual. She was so accustomed to society and attention, he had thought The Hillside the place. There she could dance and have the society of young people, go on picnics and drives, and combine amusement with the benefit of the bracing mountain air.

So Adele Knox had her way as usual, and two days later Vernon Woodford was disconsolate, for the girl, whose fair face and graceful ways had made his recent hours a dream filled with alternations of hope and despair, had disappeared with her dignified relation, and had omitted to tell him their destination.

She had been so bright and winning and gracious; and he—big, awkward, honest fellow—had labored diligently for her amusement, misconstruing her light chaff for something deeper. The ten days of her acquaintance seemed like weeks to the man, who had thought of nothing but the eyes and voice of the charming Western girl, who was always ready for a walk or a drive, and who gladly gave up the allurements of social arrangements for a quiet stroll in the woods with him.

Alas! he could not see that it was the country she loved, not his company. Now she had gone without a farewell word. There must be some mistake. He made a few inquiries, and laughed a little when he ascertained her location.

"I'll ride over in a day or two," he thought. "She forgot to tell me, I suppose, knowing I would find out, of course."

"I'm rid of that man," mused Miss Knox, as she industriously dug worms behind the wood-pile, preparatory to broiling her countenance by the brook in the meadow. "He was getting silly—they all spoil in a week. I suppose I encouraged him—I certainly wouldn't discourage attention from a gentleman with his knowledge of flowers and things. He taught me a lot. If I had him here I would make him dig worms. Uncle says he has money, and has traveled some, but he seemed to me very green, and swallowed everything I said." She laughed a trifle uneasily. "Pshaw! It was just for fun," she said. "Men shouldn't believe all a girl says."

"Gittin' wums enough?" asked Garrett Crotty, appearing from the woodshed in his shirt-sleeves. "Here! gimme that spade-fork. I'll dig ye some! Mis' Crotty is entertainin' yer uncle. Me an' him hez jest hed a talk an' a smoke. Likes folks 'round, don't he? Wall, he's a nice man. Three days he's be'n here now, an' nary a kick. My wife says he's a destankey man—whatever that is; but she alludes ter our minister thet-a-way, so it's somethin' uncommon good! Prudence Crotty knows, I tell ye. Use ter teach school when she was a young gal like you."

The old man chattered on, the hot sun pouring down on his round shoulders, as he crumpled big cakes of earth between his great, knotty hands. "Wums is skurce," he remarked.

"I think Mrs. Crotty is fine," returned his companion. "She can be pretty severe if she wants to, I imagine, can't she?"

"She kin!" responded Garrett, with a wink. "She sez an' we does in this house. Why don't ye git merried?" he asked, irrelevantly. "Then ye kin hev a man ter boss 'round."

"I've got Uncle," laughed Miss Knox. "He's enough. Gracious! I don't want to marry anybody."

"Ye will," said Mr. Crotty; "the disposition will come onter ye some day. Why, Prudence didn't want ter merry no one till she see me. Then it come over her! I was a mighty good-lookin' young feller, I want ye ter know."

"You are very handsome yet," said Adele, in her pretty, convincing way.

"Be I? Wall, maybe. I ain't looked in a glass lately," responded Mr. Crotty, much gratified. "Guess I ain't changed much 'cept my hair an' some wrinkles. You're a discernin' young woman, I'll say thet fer ye. There's wums enough fer what fish ye'll ketch," he added, holding out the box. "Now fish in my medder, an' don't ye go one step over into Jabe Bogg's lot. He's got a three-year-old bull what's an ugly cuss, an' he might git arter ye."

"I'll throw a stone at him," cried Adele, who knew nothing of bulls, and was without fear.

"Don't ye dare!" exclaimed Crotty, in dismay. "Now, ye mind. Stay right in sight of the house."

"Ain't she a pretty critter," he soliloquized, as the trim figure tripped down the lane. "She hadn't orter wear thet red thing on her head, though. Let's see, she called it her dam shanty or somethin'. Lucky Prue didn't hear her. Ef thet blamed bull sees it he'll holler. It ain't no pertection, either. She's got to wear a sunbunnit."

Turning to the house, he spied a horseman tying his steed to the iron post by the gate. "Who's thet feller? I never see him afore," he thought, as he marched up to the stranger.

"Good-afternoon, sir. Is Doctor Freeland stopping here? My name is Woodford. I just rode over from The Hillside to inquire for the Doctor and Miss Knox. This is Mr. Crotty, I presume."

"Yes, thet's me. They're stayin' here, yes. Doctor's takin' a nap, I guess.

Don't see him nowhere," answered Garrett, eyeing the other suspiciously. "Come up an' set down."

"Don't disturb him," said Woodford. "I can see Miss Knox, perhaps."

"She's fishin' in the brook down in the medder. I dunno when she'll be back," replied Crotty. "Can't fool me, young feller," he thought. "You're arter the gal. I know the signs."

"I will walk down there—it isn't far, is it? I'm an old friend of hers," exclaimed Vernon. "Perhaps I can help her catch something."

The farmer grinned. "Wall," he said, "she's over yonder. Go down the lane, an' through the bars. You'll see her somewheres. Don't spile her fishin'," he added, as Woodford started with alacrity.

It was very warm in the meadow as Adele pushed her way through the high grass. "I'm almost baked," she said, impatiently. "I'm going up to the fence where the bushes are, and sit down. Why didn't I wear a straw hat?"

Seated in the shade, slapping at mosquitoes, she reflected, "I almost wish Mr. Woodford was here to smoke, and bait my hook. He was real kind, anyway. I declare I quite miss the old thing," she thought. "That's a lovely tree just over the fence. Is that the lot in which I'm not to go? Pshaw! I'm not afraid. I will climb over and rest there until it is cooler."

Under the shady maple Adele ensconced herself comfortably, and listened dreamily to the gurgle of the stream and the soft hum of the insects of the drowsy summer afternoon. Almost asleep, she was suddenly startled by a menacing sound in the bushes—a deep growl swelling to a sharp, angry bellow.

"It's that wretched bull," she thought, springing to her feet and hastily putting on her bright cap. "Oh, dear! He is right between me and the fence! What a great, ugly thing he is!"

The animal moved slowly out in the open, muttering and shaking his head, while the air began to tremble with his appalling roars, as he advanced threateningly upon the helpless girl, who, seeing no avenue of escape, screamed loudly for help.

It was fortunate that Vernon Woodford had sense enough to follow the tracks through the tall grass when he failed to discover the object of his search upon the brook.

With no knowledge of the dangerous creature in the adjoining field, and wondering if Adele could have been mean enough to hide upon seeing him approach, his hand was already upon the upper rail of the fence when the voice of Bogg's bull made his heart leap in a quick apprehension. Then he heard the pleading, hopeless cry for aid, and he was over the fence in an instant, with a yell as ugly as that of the beast, who now pawed the soft ground and straightened his tail for a final charge.

Woodford knew what he was to encounter. He knew that every second was fraught with horror until he should again dare to think, and with a thankful sense of his physical fitness for fight, he caught up a rail from its loose hold, and charged upon the infuriated bull like a knight of old.

He crashed his clumsy lance full in the creature's flank just as it gathered itself for a forward rush, and the combined impetus pitched it headlong, plowing and roaring among the hard hack growth.

"Run for the fence! Run for your life!" shouted Woodford, and the girl obeyed.

The animal was up and upon him now, as he gathered all his strength and swung his heavy weapon. Smash! Square on the forehead it fell, and his antagonist dropped like a stone, as Woodford's arms, wrenched by the fearful strain, fell helplessly.

Back over the fence again, sitting faint and dizzy on the edge of the brook, with a girl's soft arms supporting him and a mite of a wet handkerchief sopping his hot brow, he wondered why he should feel so weak and shaky when all had come out happily.

Jabe Bogg's bull staggered up and moved slowly away with disapproving grunts. Surely things had not terminated as he planned.

Adele Knox sat very still by the side of the man she had hoped to be rid of. Somehow she did not feel so now. She thought of the words of old Garrett Crotty. "Then it come over her!" It frightened her to think of the strange, new feeling that urged her to keep so close to the one who had saved her life, to nestle to him, to keep her hands upon him. It must be gratitude, relief, joy that she was alive. How thankful her father and mother would be, and Uncle Freeland—he had always liked Vernon Woodford.

"Vernon"—it was such a pretty name. And "Woodford"—the combination was so suggestive of the country she loved. His poor arm that he had strained so! She patted it gently.

The bull had gone, and they were safe. Why did he keep staring at the water? She must see his eyes—his big, honest gray eyes. She put up her hand very gently, and turned his face, and he looked at her. There was no need of his saying anything.

Adele's eyes smiled into his for a moment; then she could not see any longer, and her handkerchief was useless for drying purposes, so she put her bright head on his shoulder, and as the wrenched arms sought a more happy resting-place, and clasped her close, she knew "it had come over her."

OUR FASHIONS

THE season has now settled down to the days of tropical heat, when even the thinnest material one can fashion into a gown seems overpowering.

The possibilities of the sheer fabrics are many, and the wise modiste declares in favor of the soft and yielding material, of which it requires fabulous amounts to concoct a full gown.

Mousselines of all kinds and colors are the chief favorites, and come in the most tempting patterns and qualities, suited to every age and station.

Lovely conceptions in black and white or gray and white for ladies of advanced years, trimmed with black



COOL-DAY GOWN

medallion laces, or one of a wavy pattern, the stitching following the wave, and having the material cut out underneath, has now taken the place of the erstwhile black gown, which at one time seemed the only possession of the elderly woman. With a little attention to one's dress many a woman can fight off the accumulating years much longer. If a "woman is only as old as she looks," let us all try to look young as long as possible.

It is almost impossible to describe by pen-pictures some of the filmy creations of the season, and do them justice, as their story can only be seen in the fine



GIRLS' SUMMER FROCK

tucking, the voluminous sweep of the well-cut skirt, the insets of lace, all of which can be as well done by the skilful home needlewoman as any one else.

To those of too much embonpoint to wear the voluminous thin dress, another material comes to them as a boon—the soft-finished silks, which at midsummer are reduced to prices within the reach of all.

The sheath-like skirt finished with the popular flounce, which can also be treated to ruffles or folds, with a soft surplice waist, makes an ideal dress for a large woman.

How to Dress

WAIL OF THE SHIRT-WAIST

Ball-gowns are created of mousseline, all plaited,
And street-gowns of serges and tweed,
While as for the wrappers, the insolent flappers
Have challies and lawn for their meed;
But there's never a query about my material—
Anything does for me.

Some golf-skirts are built like a Highlander's kilt,
And others with circular flare,
And there's careful designing of even the lining
Of jackets my lady's to wear;
But they make a reduction upon my construction—
Any shape does for me.

You'd not think of adorning yourself in the morning
With bodices décolleté,
Or deem yourself proper to go as a shopper
In tea-gown or thin negligée;
But there's always evasion about my occasion—
Any time does for me.

Petticoats, you're aware, swathe the sex that is fair,
While to trousers their brothers aspire;
The laws are so stringent that neither contingent
Infringes the other's attire;
But it seems my vocation to garb the whole nation—
Any one dares wear me.

—Chicago Daily News.

LACE JACKET

This novelty can belong to any girl deft with her needle. Procure a jacket-pattern stamped on pink muslin of any of the Battenburg patterns, follow the



LACE JACKET

pattern in black silk soutache braid, and fill in the designs with black purse-silk or black twist. Finish on the edges with narrow black lace.

GIRLS' SUMMER FROCK

This model is commended to mothers of sixteen-year-old girls, it being a stylish costume for all dress occasions. The material is blue violet trimmed with twine-colored lace and fancy black braid. The chemisette is of cream silk mull. The hat is of chip, either black or white, faced with plaited chiffon, and trimmed with pompadour ribbon.

Any of these patterns furnished from this office for ten cents. Waist and skirt are separate patterns.

HOUSE-GOWN.—Waist, No. 4172. Bust measures, 32, 34, 36, 38 and 40 inches. Skirt, No. 4058. Waist measures, 22, 24, 26, 28, 30, 32 and 34 inches.

GIRLS' SUMMER FROCK.—Waist, No. 4171. Skirt, No. 4103. Pattern cut for misses of 12, 14 and 16 years of age.

COOL-DAY GOWN.—Coffee-coat, No. 4165. Cut in three sizes—32, 36 and 40 inches bust measures. Skirt, No. 4134. Waist measures, 22, 24, 26, 28 and 30 inches.

GOLFING-COSTUME.—Tucked Gibson waist, No. 4123. Bust measures, 32, 34, 36, 38 and 40 inches. Skirt, No. 4166. Waist measures, 22, 24, 26, 28 and 30 inches.

HOUSE-GOWN

In the house-gown illustrated you will find a very choice model which can be conceived in tan or écreu-embroidered mull. The skirt is of the newest pattern of seven gores, and tucked vertically, leaving just enough to form a flare at the bottom of the skirt. The yoke at the top is of coarse string-color lace, the inserting at the bottom being black lace over white silk, with the wave of the lace followed in emerald-green bébé velvet ribbon. The waist and sleeves are tucked, using green silk thread, the sleeves following the decoration on the skirt. The neck is the new finish, being low and consisting of only three rows of the green velvet sewed



GOLFING-COSTUME

around the neck of the dress, or using a heading of the color of the material, with the ribbon drawn through.

COOL-DAY GOWN

A comfortable gown for cool days is made of cream wool canvas, with a collar of cream Irish lace and ties of velvet ribbon. The hat is of white chip, with pale pink roses. The coffee-coat is one of the smart fea-



HOUSE-GOWN

tures of the season, and is worn both en suite or in black taffeta as a general wrap.

GOLFING-COSTUME

A fashionable golfing-suit or general out-of-door costume is made of dull blue linen stitched in white. The tie is of white linen, the belt black leather, and the hat of Japanese straw that is trimmed with white mousseline and louisine ribbon and field-flowers of blue or scarlet.

THE HORRID GRANDMOTHER

BY MARY BRADLEY BLISS

"OH, DEAR!" said little Madge Warren, as she turned away from the window with a frown on her usually sweet face. "I do fink it might stop raining. It's rained and rained all day yesterday and all day to-day, and now it's after dinner, and I don't know how I can ever get fru the day."

"Why don't you play with your dollies?" asked her mother.

"I can't; they's both sick, and it's too rainy for my Doctor F'ank to come and make 'em well. Rosa's got the scarlet fever and dipfury, and will die, I'm a'fraid, and Gretchen's got the whooping-cough and measles."

"I think I could give them some medicine that would cure them," said Mrs. Warren.

"Oh, no, you couldn't, 'cause you're allerpath, and the 'paths mustn't be mixed, Cousin F'ank said."

"There's kitty; couldn't you get some comfort out of her?"

"No; she doesn't love me no more," said Madge, mournfully shaking her little head. "I know she don't, 'cause when I hugged her, and asked if she loved me, she just scratched me and ran away."

"You shouldn't have hugged her so tight," said her sister Nellie, a girl of thirteen.

"I had to, 'cause I loved her so. Please, mama, tell us a story, one 'bout when you was a little girl. Did you have troubles, too?"

"Yes," answered her mother, smiling, "and I did not have as many things as you have to make me happy, for I had no sister to play with, nor any little cousin next door."

"What did you do? Did your mama play with you?"

"No, dearie, my mama did not play with her little girl as I play with you and Nellie."

"Wasn't she ever a little girl and learned how?" asked Madge. "And didn't she ever streeze you hard, and call you dearie and darling and my precious?"

"No, darling; but she thought so just the same, for she loved me dearly, but it was not her way to say so."

"I wish she lived here now. I would tell her so, wouldn't you, Nellie?"

"I suppose so," answered Nellie, blushing a little, as her eyes met her mother's, for only that week she had said "she was very thankful for one thing, and that was that there was no horrid grandmother at their house, as there was at Dorothy Allen's." This remark had been called forth because Dorothy was obliged to remain at home with her grandmother while Mrs. Allen went out shopping, and Dorothy and Nellie had made delightful plans for that particular afternoon. On being reproved for making so selfish a remark, her mother added, "I really hope, daughter, you did not say anything of that kind to Dorothy, for it might have a bad influence." Nellie, who was a truthful, if selfish, girl, had said that "she had, and that they were both cross to grandma, who looked sad all the afternoon, but that she was now very sorry she had said such a naughty thing."

Just then a little waterproofed figure ran past the window, at the sight of which Nellie gave a little shriek of delight and ran to meet her. A moment later she returned to the cozy library with Dorothy Allen, who said she had to come if it did rain, she was so lonesome at home.

"Mama's just going to tell us a story. Don't you want to hear it, too?"

"Yes, indeed!" said Dorothy, and moved her rocking-chair closer beside Nellie.

"Tell it now, mama; it takes you so long to fink," said Madge, as she climbed into her mother's lap.

"Well," said Mrs. Warren, "I will tell you a story that happened a good many years ago. There were a father and a mother, whom we will call Mr. and Mrs. Smith, who had five children."

"What were their names, and how old were they?" asked Nellie.

"David was sixteen, John about thirteen, Lucia and Fannie ten, and Willie nearly eight years old. One afternoon early in November Mrs. Smith heard a knock at her door, and on opening it found a neighbor outside, who said, 'Don't be frightened, but I've bad news for you. Mr. Smith has met with an accident, and broken his leg. They are bringing him home now, and the Doctor asked me to come on ahead and tell you, and help you get things ready.'"

"Didn't she stop to cry any tears?" asked Madge.

"No, darling, there was no time then for tears; and no one saw her 'cry any tears' all that winter. She did it when alone, if at all."

"The next afternoon Mrs. Smith went to the barn, where David and John were at work, and had a long talk with them about the future, which looked very dark to her, as there was still a mortgage on their farm, which was due the first of April. The mortgage must be paid promptly, for the holder of it was a hard man with which to deal. The wheat and oats were yet to be threshed and sold, food and clothing gotten in some way for seven people, and some time a doctor's bill to pay."

"It's hard trouble for us, my boys," she said, "but I know the Lord will help us out in some way if we trust him and work hard ourselves, for the two go together."

"Various plans were discussed, and at last they decided that David must give up all thought of going to school, but that John was to keep on through the winter if possible."

The Young People

"A neighbor who had just lost a horse offered to take their team to use for the keeping through the winter. David commenced at once to thresh out the grain, which was a very different thing to do then from what it is now, as they had no machines, but used flails."

"What are they?" asked Dorothy.

"Two sticks of unequal lengths—one about a yard long, and the other a little longer—fastened together with a leather strap. A man would stand and beat the grain out of the husks, and then it would be run through a fanning-mill."

"What's a fanning-mill?" interrupted Madge. "Is it a mill made out of fans, to fan folks with?"

"Not quite," replied her mother. "A fanning-mill is a machine into which the beaten grain is put to separate the grain from the chaff, after which the grain is put into bags ready to sell. It was not very hard work to turn this mill, so Mrs. Smith helped David, going to the barn as soon as it was light enough to see to work."

"Who did the work in the house and took care of Mr. Smith?" asked Nellie.

"Mrs. Smith did a good deal before going to the barn, and would go in in time to help get the dinner and tea. Lucia and Fannie did the rest, waited on their father, and helped to amuse their brother Willie."

"They were 'ficient girls, weren't they, mama?" asked Madge.

"What, darling?"

"'Ficient, like what Mrs. Terry said her Bridget was, 'cause she knew so much."

"Oh! Efficient, you mean. Yes, they were in every sense of the word."

"Did they have any dollies, mama?"

"The dollies in those days were not like yours, darling, and Mrs. Smith could not afford to buy even cheap ones, so all they had were home-made. But they loved them quite as much as you do your pretty, Rosa, and would play tea-parties with only apples and pop-corn for their cake and candy."

"Oh, dear! I'm so glad I wasn't borned then," said Madge; and she nestled more closely to her mother, and gave Rosa an extra hug.

"The neighbors were very kind, and helped them a great deal with their work," continued Mrs. Warren, "so they got through much sooner than they expected, and in December the merchant at the corners, two miles away, offered David a place in his store. As David was young and inexperienced the merchant paid him only two dollars a week, with his board. David was very glad to get that, though, as he could be at home every Sunday, and could learn a good deal all the time, both in and out of books, by improving his time. And when I tell you that he is now one of the most successful merchants in a large city, you will know he did improve his odd minutes well. Meanwhile at home every cent that could be earned and saved was laid by to pay on the mortgage."

"How could they earn any money?" asked Dorothy.

"It was a hard thing to do in those days, but Mrs. Smith earned some by sewing for her neighbors, and she spun for them, too, and took yarn in payment, which she knit into good, warm socks, and sent to the store to help pay for the few goods she was obliged to buy. All the butter and eggs were sold except what Mr. Smith ate."

"Didn't they eat any butter on their bread and fings?" asked Madge.

"No, not one bit all that winter; neither did they have a pie or cake or even white bread except at Thanksgiving and Christmas. Yet they did not go hungry, by any means, for there was good rye or corn bread, with buckwheat-cakes, apples and vegetables."

"Every cent that could be earned or saved was added to the grain-money, and the payment was made the first of April, leaving but little money in the purse. But the farm was their own."

"What did they do for clothes if they had so little money?" asked Nellie.

"They wore their old ones, which the tired mother sat up late at night to mend, so they could have them to wear the next day, and some others were made out of hers and Mr. Smith's. I have heard Mrs. Smith say she thought she had worked and saved all her life, but nothing before nor since equaled the hardships of that winter. Mr. Smith was not idle, either; as the children could not go to school, he taught them at home, and in various ways helped to amuse them when they had time to play."

"I don't suppose they had any Christmas presents that year," said Dorothy.

"I fink it was real too bad if Santa Claus didn't fill their two stockings!" exclaimed Madge.

"They did have a nice Christmas, although they did not expect it, and bravely kept from talking about it before their father and mother. The night before Christmas eve Mrs. Smith cried herself to sleep thinking of their disappointment; but the next evening a neighbor called on his way home from the store, and when he said good-night he gave her a knowing look, and said so low the others could not hear him, 'Go into the shed-room.' On going there she found him with a package of things David had sent by him."

"He was nice to play he was Santa Claus, 'cause

Santa Claus fordot to come there," said Madge. "What fings did he send them?"

"One day, when David was filling the candy-jars, Mr. Barclay told him to eat the pieces if he liked. But David saved them in a box, and the day before Christmas Mr. Barclay saw the box and asked

about it, and David said he had saved the candy for his little brothers' and sisters' Christmas. Now, Mr. Barclay did not believe in Christmas gifts, and would not give them to his own little daughter; he said he could give his presents at any time as well as at Christmas, but something about this touched his heart, and he went and got a nice lot of sticks, balls and hearts, and handfuls of nuts and raisins, and filled a large box full. Then he sent John a good knife, and some groceries to Mr. and Mrs. Smith, and gave David a pair of boots. David boarded in his family, and after dinner Mrs. Barclay gave him a box of nice, fancy cakes, like the ones she had made for her little girl, and the little girl herself gave him some pretty story-books for his sisters, and a mouth-organ for Willie."

"What was her name?" asked Madge.

"Dorothy Barclay," answered Mrs. Warren.

"Why, that was my Aunt Dorothy's name before she was married!" exclaimed Dorothy.

"Yes; and she married this same David, only his name is David Allen instead of Smith."

"Was this story about my own grandmother?" asked Dorothy.

"Yes; I changed nothing but the name, and Smith was your grandmother's middle name. Your father is the little Willie, and a good son he has always been to his mother."

"But I have not always been good to her. Sometimes I've thought her horrid," she added, bursting into tears. "But I'll never think so again, never! I will do all I can to make her happy every day she lives!"

"That is right, Dorothy dear; and every one ought always to try to do that for all old people, but particularly for those who have claims on us. They have all borne heavy burdens and sorrows, and in their last days should not be made to feel in the way."

DO IT YOURSELF, MY BOY

Why do you ask the teacher or some classmate to solve that hard problem? Do it yourself. You might as well let some one else eat your dinner as to "do your sums" for you.

Do not ask the teacher to parse all the difficult words, or to assist you in the performance of any of your duties. Do it yourself. Do not ask for even a hint from anybody. Try again.

Every trial increases your ability, and you will finally succeed by dint of the very wisdom and strength gained in this effort, even if at first the problem is far beyond your skill. It is the study, not the answer, that really rewards your pains.

Look at that boy who has succeeded, after six hours, perhaps, of hard study. How his eye is lit up with a proud joy as he marches to his class!

He recites like a conqueror, and well he may. His poor, weak schoolmate, who gave up that same problem after the first faint trial, now looks upon him, as a superior. The problem lies there—a great gulf between those boys who stood yesterday side by side. They will never stand together as equals again.

The boy that did it for himself has taken a stride upward, and, what is better still, gained strength for greater ones. The boy who waited to see others do it has lost both strength and courage, and is already looking for some excuse to give up both school and study forever.—Albert N. Raub, in Success.

GOD HELP THE BOY

God help the boy who never sees
The butterflies, the birds, the bees,
Nor hears the music of the breeze
When zephyrs soft are blowing.
Who cannot in sweet comfort lie
Where clover-blossoms are thick and high,
And hear the gentle murmur nigh
Of brooklets softly flowing.

God help the boy who does not know
Where all the woodland berries grow,
Who never sees the forests glow
When leaves are red and yellow.
Whose childish feet can never stray,
For such a hapless boy I say—
When Nature does her charms display—
God help the little fellow!

—Nixon Waterman.

AN ENTERTAINING GAME

When it is your turn to provide your quota of fun at an evening party, ask for a piece of candle, and after you have obtained it, light it and request the person nearest to you to place it on the top of his head and then blow it out.

Very probably he will claim it cannot be done; but if you assure him that you can do it, he will certainly place it on his head and blow upward at it with all his might, much to the amusement of his companions.

He will be unable to extinguish the candle, however, and so will all the others who try to do the trick. Yet it can be extinguished, and quite easily, provided it is placed in a proper position on the head. It must be placed as far forward as possible, and the head must be tilted back while it is being placed there. Even a slight breath will extinguish it.—Selected.

MIGHT ACQUIRE IT

HE—"Do you think you could learn to love me?"
She—"I might. I learned to like olives."

GOATS AND KIDS

"Goats will eat anything," remarked Bloomfield, by way of introducing a narrative.
"So will kids," Bellefield cut in. "I've often seen a small boy munching a piece of bologna sausage."—Detroit Free Press.

READY TO PLEASE

"Do you guarantee this goods not to fade?"
"Absolutely. And if it does we will sell you new goods to match the changed color."—Indianapolis News.

WHY SHE KNEW

Mammy Blackey—"Whad meks you fink Mistah Moke am gwine to p'opose at last?"
Daughter—"Kase I kin tell from his hungry looks an' de seediness ob his clothes dat he ain't gwine to be able to suppo't hisse'f much longer."—Harper's Bazar.

INJUSTICE

"Ethel, dear, how can you expect that cold of yours to get any better while you are doing absolutely nothing for it?"
"Doing nothing, mama? Why, I am taking absent treatments for it right along, just as hard as I can!"—Chicago Tribune.

TACT

"The ear-rings are very pretty," she said, with just a tinge of disappointment, "but the stones are very small."
"But, my dear," replied the foxy man, "if they were any larger they would be all out of proportion to the size of your ears."—Philadelphia Press.

"DOT JOKE"

"Did you ever hear the joke about the guide in Rome who showed some travelers two skulls of Saint Paul—one as a boy and the other as a man?" asked an American of a German friend, who claimed that he had acquired the real New England sense of humor.
"No," said the German, beaming in anticipation of a good story. "Tell it me at once, mein friend, dot joke."—Register.

AN INVIDIOUS EXPLANATION

"Bill," said the first veteran, "I can't forget them days when we drank from the same canteen."
"No more can I," answered Bill. "When it was water we drank we always drank from yours; when it was something else we drank from mine."
And a muffled grumble and rumble and roar told that the battle was on once more, and well-nigh wrecked the bar-room floor.—Judge.

HOW HE KNEW

"Do you know anything about the people who have moved next door?" she inquired.
"Not much," he answered, "except that their honeymoon is not yet over."
"How did you find that out?"
"By observing. It was raining when he came home this evening, but she did not make him stop at the front door to wipe his feet."—Washington Star.

A PILL STORY

The following is told of a druggist who is "great" on patent medicines. He manufactured one kind, called "Doctor Pratt's Two-Grain Antibilious Pills."
One day a small boy walked into the shop, and said, "Please, sir, give me a box of Doctor Pratt's pills."
The druggist looked at him a minute, and then inquired, "Antibilious?"
"No," said the youngster; "uncle's sick."—Pittsburg Bulletin.

THE BRAKEMAN'S WAY

"Umg-ah-bah-ger-r-uh!" remarked the brakeman on the train going through Maine, as he poked his head into the car.
An old lady beckoned him to her, and softly inquired, "Young man, why do you not pronounce the names of the towns so that the passengers may understand them?"
"Madam," courteously responded the brakeman, "if I could say those names proper I'd be gettin' a thousand a week in grand op'ry."—Baltimore American.

SIMILIA SIMILIBUS CURANTUR

"Poor man!" sighed the lady reformer as she peered through the bars at the miserable convict. "Poor man! It must be hard to be deprived of light and flowers and birds and human companionship."
"It is, lady, it is," moaned the prisoner.
"I believe," mused the lady, "that I shall marry you to reform you."
Here the convict laughed heartily for some moments.
"Pardon me, madam," he said, as soon as he found his voice. "Pardon this impolite hilarity, but I am in here for bigamy."—Judge.

Wit and Humor

THE MAN BEHIND THE PICK

There has been all kinds of gush about the man who is "behind"—
And the man behind the cannon has been toasted, wined and dined.
There's the man behind the musket, and the man behind the fence;
And the man behind his whiskers, and the man behind his rents;
And the man behind the plow-beam, and the man behind the hoe;
And the man behind the ballot, and the man behind the dough;
And the man behind the jimmy, and the man behind the bars;
And the Johnny that goes snooping on the stage behind the "stars;"
And the man behind the kisser, and the man behind the fist,
And the girl behind the man behind the gun is on the list;
But they missed one honest fellow, and I'm raising of a kick,
That they didn't make a mention of the man behind the pick.
Up the rugged mountain-side a thousand feet he takes his way.
Or as far into the darkness from the cheering light of day,
He is shut out from the sunlight, in the glimmer of the lamps;
He is cut off from the sweet air in the sickly fumes and damps;
He must toil in cramped positions; he must take his life in hand,
For he works in deadly peril that but few can understand;
But he does it all in silence, and he seldom makes a kick,
Which is why I sing the praises of the man behind the pick.
He unlocks the bolted portals of the mountains to the stores
Hid in Nature's vast exchequer in her treasure-house of ores.
He applies a key dynamic, and the gates are backward rolled,
And the ancient rocks are riven to their secret heart of gold.
Things of comfort and of beauty and of usefulness are mined
By this brave and quiet worker—he's a friend of humankind;
Who, though trampled down and underpaid, toils on without a kick;
So I lift my hat in honor of the man behind the pick.
—Colorado Springs Gazette.

HOW SHE PRONOUNCED IT

Alice, who was five years old, was often asked to run errands for her mother. She went very willingly if she could pronounce the name of the article wanted, but she dreaded the laughter which greeted her attempts to pronounce certain words. "Vinegar" was one of the hardest for her. She never would go for it if she could help it; but one morning her mother found it absolutely necessary to send her. On entering the store she handed the jug to the clerk, and said, "Smell the jug and give me a quart."—Chicago Chronicle.

SMART CHILD

Congressman Brownlow, of Tennessee, has a smart granddaughter, whose clever sayings are the delight of her parents. The other day she came to her grandfather with her face all smiles.
"Grandpa," she said, "I saw something this morning running across the kitchen floor without any legs. What do you think it was?"
Mr. Brownlow studied for a while, but finally gave up. "What was it?" he asked.
"Water," said the youngster, triumphantly.—St. Louis Post-Dispatch.

A MIXED RECIPE

A fashionable young lady visited a cooking-school the other afternoon, where her attention was equally divided between a new dress worn by an acquaintance and the directions for making a cake. Upon returning home she undertook to write down the recipe for making the cake for her mother, and the old lady was paralyzed when she read the following:
"Take two pounds of flour, three rows of plaiting down the front, the whites of two eggs cut bias, a pint of milk ruffled round the neck, half pound currants, with seven yards of bead trimming, grated lemon-peel with Spanish lace fichu; stir well, and add a semi-fitting paletot with visite sleeves; butter the pan with Brazilian topaz necklace, and garnish with icing and passemencerie. Bake in a moderately hot oven until the skirt is tucked from the waist down on either side, and finish with large satin rosettes."
Her mother said she wouldn't eat such a cake, and she thought these new-fangled ideas in cooking ought to be frowned down.—Michigan Badger.

WHAT HE WOULD DO

She was young and romantic. He was a foreign nobleman, and he wore a uniform, and over it a long blue cape that hooked in front with the aid of two big gold eagles.

They had walked out to the very end of the pier, and the full moon and murmuring waves were full of suggestion.

She leaned over, and looked down into the rippling darkness below.

"If I threw myself in there," she said, in a voice that was almost a whisper, "what should you do?"

He leaned over, and looked down, then straightened back and smiled sweetly.

"I should r-r-regret it," he answered, suavely.

CARRIED IT ONE STEP FARTHER

Tommy was given a new diary, and encouraged to set down each day's doings. He was very proud of it, and determined to keep it faithfully.

The first day he wrote, "Got up at seven," and then continued to record incidents of the day. At his father's suggestion he took it to his teacher for approval.

She did not like the phrase "got up." "Don't say 'got up,' Tommy," she said. "The sun doesn't get up; it rises."

When he retired that night Tommy remembered his lesson, and wrote carefully in his diary, "Set at eight."—Detroit Free Press.

LESSONS IN POLITICS

"No, my son, the rivers and harbors of the country are of prime importance."

"But, father, is it not likewise important that the arid lands of the West be irrigated?"

"In a way, doubtless. But irrigation, while it affords means of wasting public funds, in many respects not inferior to the means afforded by the improvement of rivers and harbors, has nevertheless its limitations. For money wasted in irrigation can be wasted only in a few congressional districts, and these in states not politically important, whereas, by means of river and harbor work, money can be wasted where it will do the most good. There is no district which has not its rivers or harbors."

"But have I not read somewhere that the real purpose of river and harbor improvement is not in consonance with our highest civic ideals?"

"Quite likely, my son; there are those who believe such to be the case, but they are in error. Our highest civic ideals are always ready to yield in the interests of harmony."—Life.

A SOLICITOR'S EXPERIENCE

I have a distinct remembrance of a curious business experience I had while at college. I was manager of the "Junior Annual," and had been going the rounds of the city "rustling ads," as you say here at Stanford. I had been rather unsuccessful during the day, so late in the afternoon I determined on a long shot. I had been recommended by a friend to try to land the ad of a certain crematory (a new thing then), whose proprietor he knew. I went around, and was surprised to find the proprietor, a Mr. Stiff, very willing to discuss my proposition. We must have talked together fully two hours. He asked every imaginable question as to terms, contract, and so forth, and I gave every imaginable answer. My fighting blood was up, and at last I persuaded him to sign a contract for a sum up in the hundreds. Was I happy! I arose and bid him good-afternoon with much effusion, slipped my contract-blanks in my pocket and started out. As I was about to close the door from the outside, he called me back.

"Just a moment, Mr. Halsey."

"Yes, sir; what is it?" I replied, rather surprised.

"You understand, don't you, that this advertisement is to be taken out in trade?"—Professor Halsey, in The Chaparral.

THEY GOT THE SHELL

A story from which one might draw several morals was recently printed in the New York "Times." It may suggest, at least, the wisdom of thinking twice before consulting a lawyer when there is little at stake.

The two men were ushered into the private office the other day, and stood in silence before the lawyer.

"Well?" said he.

"You ask him," urged one of the men, in a hoarse whisper.

"Wait a minute," counseled the other. "Maybe he'll guess it."

"Come, come, gentlemen, my time is valuable," interrupted the lawyer.

"We are twin brothers," chorused the two, "and we thought you'd have guessed it."

"Is that all?" asked the lawyer, severely.

"No," continued one of the strange pair. "We want to ask you a question. A relative died a short time ago. We were his only heirs. He left a paper, saying that his oldest surviving relative was to have all his property; but neither of us is the oldest. So what are we going to do?"

"How much did he leave?" asked the lawyer.

"Seven dollars?" cried both in concert.

"Divide it," said the lawyer.

"What is your fee?" asked one.

"Seven dollars."

The two men paid the fee between them, and departed, relieved of a great mental burden.

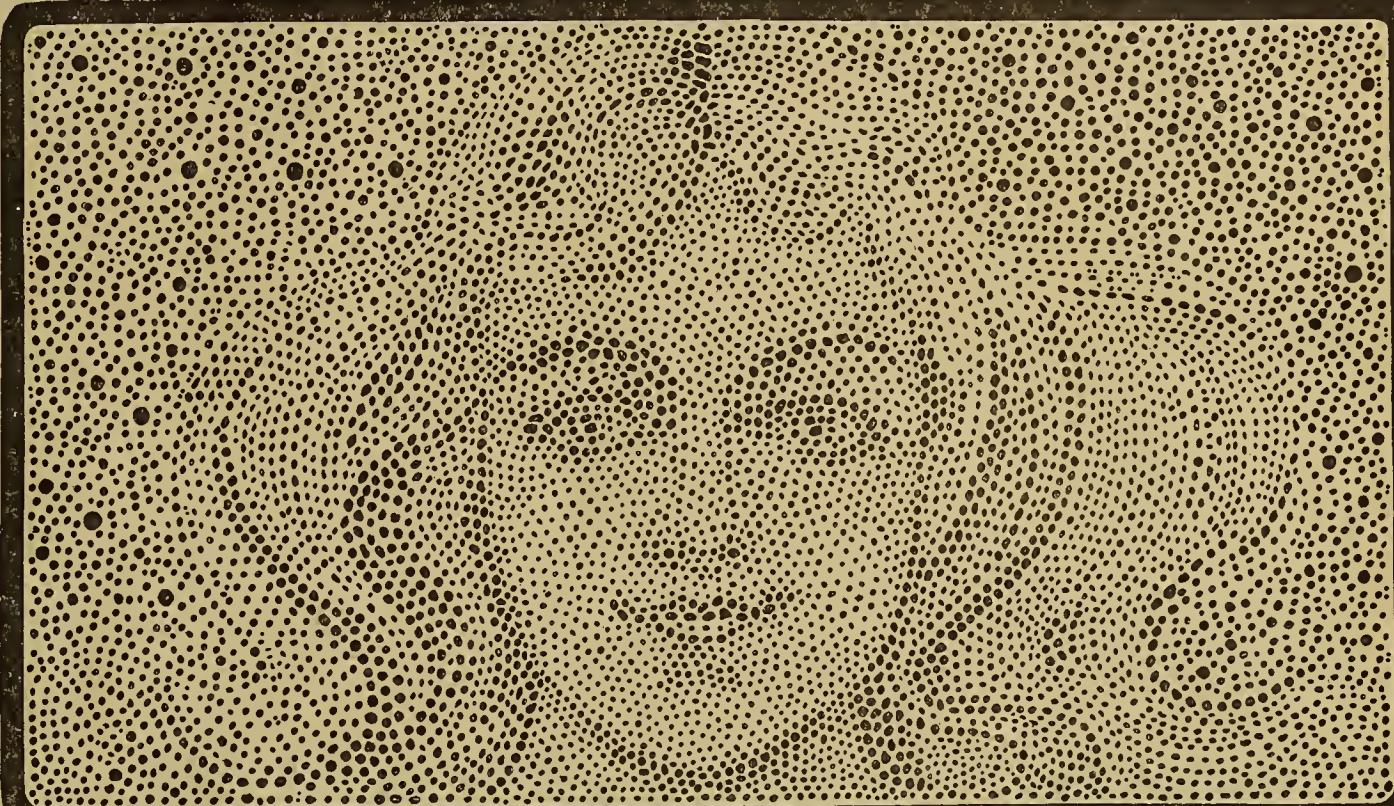
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| FIRST PRIZE | - | \$500.00 Cash |
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| 4 Prizes, | \$25.00 each | \$100.00 Cash |
| 10 Prizes, | \$10.00 each | \$100.00 Cash |
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The more counts you send in the greater your chance of winning one of the big cash prizes. Count the dots half a dozen times, and you will be almost sure to send in the correct answer.

This is a splendid opportunity to win a great cash prize as the reward of only a little perseverance and care. The exact number of the dots can be counted by any one at the price of a little time.

The prizes are so great that you have a big chance of winning hundreds of dollars for the short time it takes to count the dots.

If two or more give the correct count the grand prize will be divided, and the same method will be adopted in awarding the other prizes.

Even if your answer is not correct you may get a prize, because the money goes to those who send in the correct or nearest correct counts. We do not care who wins the prizes. They are yours if you have the skill and perseverance.

No one employed by or connected in any way with the FARM AND FIRESIDE, nor any resident of Springfield, Ohio, or its suburbs, will be allowed to enter the contest.

If possible, use the subscription blank printed on this page; or, if desired, a sheet of paper may be used the same size as the blank printed on this page.

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The count is absolutely free. Every cent paid is applied on your subscription. You can count as many times as you want. Send 35 cents with each count. Each count will then be registered, and you will receive a full year's subscription to the FARM AND FIRESIDE for every 35 cents you send in.

Use This Coupon, if Possible, or Cut a Piece of Paper Same Size as This Coupon

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FARM AND FIRESIDE
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Inclosed find
(Amount of money)

to pay for subscription
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to the Farm and Fireside.

Name

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Are you a new or old subscriber?
(Write "New" or "Old")

My count (or counts) of the dots is:
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FINE NEW PATTERNS Only 10 Cents Each

These patterns retail in fashion bazaars and stores for twenty-five to forty cents each, but in order to increase the demand for our paper among strangers, and to make it more valuable than ever to our old friends, we offer them to the lady readers of our paper for the low price of only 10 cents each. Or

FREE We will give any TWO of these patterns for sending ONE yearly subscription, new or renewal, to the Farm and Fireside at the clubbing price of 35 cents. Or we will send the Farm and Fireside One Year, new or renewal, and any ONE pattern for **Only 35 Cents**

ANY ONE ACCEPTING THIS OFFER IS ALSO ENTITLED TO ONE
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SEE NEXT PAGE

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For ladies, give BUST measure in inches. For SKIRT patterns, give WAIST measure in inches.

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Satisfaction guaranteed or money refunded.

To get BUST and BREAST measure, put the tape-measure ALL of the way around the body, over the dress, close under the arms.

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COMMENT

THE SUGAR-BEET INDUSTRY

"The area sown to sugar-beets in the United States in 1902," says the "Crop Reporter," "as estimated by Messrs. Willett and Gray, New York, is 259,513 acres, against 137,925 acres sown in 1901, and 132,000 acres in 1900. Out of the eleven states enumerated as participating in this industry in 1902, eight show an increase, and one only a decrease, in area over that of the preceding year, the aggregate increase for the entire country amounting to 121,588 acres.

"The most notable increases in area are in four states, which are credited with about eighty-eight per cent of the aggregate area of the country; namely, Michigan, California, Colorado and Utah. Michigan, with an area in the present year of 98,000 acres, shows an increase over the area of the preceding year of upward of seventy per cent, and for the first time in the history of the industry takes rank as the leading state in the area devoted to this product. California, which has heretofore been the foremost state in respect of sugar-beet area, is this year in second place, with an acreage of 71,234 acres, the largest area, however, ever sown in the state, and one showing an increase of about ten per cent over that of the previous year. Third in importance in this industry is Colorado, with an area of 39,449 acres in 1902, against 23,700 in the preceding year, an increase of sixty-six per cent. In Utah the 1902 area is 18,600 acres, against 12,500 acres in 1900, showing an increase of forty-nine per cent. The other states of smaller production which show increases in area are Washington, Oregon, Nebraska and Ohio. Wisconsin and New York are credited with the same area as last year. The only state which shows a decrease is Minnesota."

AFFAIRS OF NOTE AND MEN OF MARK

NEW THINGS IN AMERICAN AGRICULTURE

In an interesting article in the Washington "Evening Times," about the Department of Agriculture's work in aiding the progress of American agriculture, Secretary Wilson says:

"Four of five years ago we raised twenty-five per cent of the rice we used. The Dingley law imposed a heavy tariff, and our rice was not suited to our requirements; it was soft. We sent a Southern man to China to hunt for what we wanted. He found a flinty, clump rice, and this year we shall supply the home demand. We shall have our own rice this year. We shall be exporters after this. And those gentlemen who sent rice to the Danish West Indies in hope that the United States would buy the islands will find that we have enough without their stock.

"We have been paying eight million dollars a year for macaroni from Italy, and it was not of a very tempting quality at that. We will raise two million bushels of macaroni wheat this year. We expect to develop this crop until we add twenty million dollars' value annually to our wheat crop. Macaroni wheat will grow in ten inches of rainfall. It is suited to the Western states as far west as the 100th meridian."

NEW IRRIGATION LAW

Speaking of the effects of the new irrigation law the Washington correspondent of the New York "Tribune" says:

"When President Roosevelt signed the bill providing for national irrigation on June 17th last, the originators of the measure said that a new West had been born—a new empire created out of the worthless lands owned by the government. But the scientific men of the government indulged in no such predictions. . . .

"These men laugh at the concern of the Eastern farmers, who have been perplexed lest the irrigation and cultivation of the vast territories in the West should ruin their business. The development of the work will be so slow that it will have absolutely no effect whatever upon the Eastern farmer.

"It will doubtless be a splendid thing for certain localities in the states and territories where it is to be put into operation, but as a national measure its effect will not be felt for many years to come, and even after the lapse of half a century it is doubted whether it will have any effect upon the markets for products of the soil. It is a gigantic work that will require years for its accomplishment, and during these years of its up-building the population of the United States will have so greatly increased that irrigation is deemed unlikely to affect the farm products of the present fertile regions of the country.

"F. H. Newell, of the Geological Survey, who has direct charge of the irrigation-work, estimates that of the five hundred and fifty million acres of arid lands owned by the government there is water enough within possible reach to irrigate about sixty million. A falling off in the water-supply bordering the arid regions would mean that even less land could be placed under irrigation.

"This is the practical view of irrigation taken by the government experts who have the work to do. They are irrigation enthusiasts, but they know the limitations of the scheme.

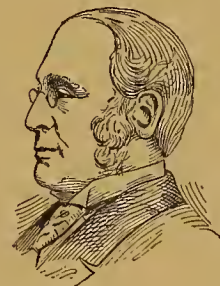
"Mr. Newell was asked when he thought the entire work would be completed. 'We shall all be dead and gone long before that,' he said. 'It is the work of a century; not the work of a few years. I have been enthusiastic about the commencement of the work for a long time, but I am distressed over the predictions that I see constantly about the early results that are to be obtained. The public will be disappointed, I know, when they come to realize that this thing cannot be finished in a short time, and they will be disappointed to learn, as they must learn before long, that irrigation depends upon water, not upon land. The limitations of water in the arid sections of the West make it absolutely impossible to realize the predictions that have been made by many enthusiastic people.'"

Governor Van Sant of Minnesota became a prominent figure in the affairs of the nation a few months ago by his prompt, strong opposition to the merger, or consolidation, of the Northern Pacific and Great Northern railroads. The merger question suddenly became one of the utmost importance to the people of the Northwest, and Governor Van Sant was the first state executive in the Union to take action on it and appeal to the law against the proposed merger of competing railroads. The St. Paul convention, which recently renominated him by acclamation, adopted the following resolution:

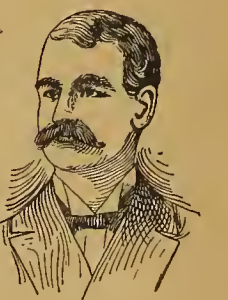
"It has been the settled policy, as declared in the laws of this state for a quarter of a century, that competing lines of railway shall not be merged. We believe that the protection of the citizen and his property, as well as the safety of the state, rests in obedience to law, and we therefore heartily commend Governor Van Sant in his efforts to enforce the laws of this state against the consolidation of competing lines of railway."



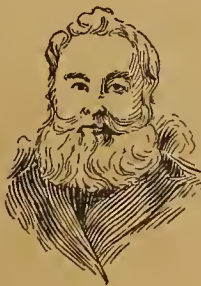
Dr. Charles William Eliot, who is closing his thirty-fourth year as the twenty-second president of Harvard University, was born in Boston, Mass., March 20, 1834. He was graduated with high honors from Harvard in 1853, and in the following year began there his remarkable career as an educator by teaching mathematics. After filling various chairs and spending some months abroad in study he was elected president of Harvard in 1868, and his administration during the thirty-four years that have passed "has been one of extraordinary brilliancy, and the university has enjoyed a prosperity heretofore unknown. The fame of the institution has become thoroughly national, and the name of its illustrious president is known and honored throughout the civilized world."



Congressman Charles Edgar Littlefield, whose name is now quite prominent in connection with anti-trust measures to be pushed forward in the next session of Congress, represents the second district of Maine, having been elected to fill the vacancy caused by the death of Congressman Dingley. Mr. Littlefield was born in Lebanon, Me., fifty-one years ago, was admitted to the bar in 1876, was elected to the Maine legislature in 1885, became its speaker in 1886, and was the attorney-general of his state from 1889 to 1893.



Alexander Graham Bell is especially notable among inventors for having acquired great wealth from his inventions. The validity of the Bell telephone patents have been fiercely and repeatedly tested in the courts, even to the highest in the land, and the decisions have uniformly been in Professor Bell's favor. He was born in Edinburgh, Scotland, March 3, 1847, and received his education at the Edinburgh High School, the Edinburgh University and the London University. In 1870 he removed to Canada, and two years later he settled in the United States and became a teacher of deaf-mutes in Boston. Professor Bell has devoted the remainder of his life to the education of "children having defective hearing, sight or mentality."



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Mr. Greiner Says:

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A GOOD TIME this for a thorough trial of vegetarianism! If meat prices keep up, however, the price of butter, eggs and garden products cannot be expected to remain on a very low level.

RAPE FOR POULTRY.—At the Cornell Experiment Station grounds, Ithaca, N. Y., the flocks of poultry confined in yards were given liberal and regular rations of Dwarf Essex rape. This is surely one of the finest plants for that purpose, and for many others, besides. Immense quantities of green stuff for cutting or for pasture are quickly produced by sowing a patch of rape on good ground at any time during the summer or fall. The plant is hardy, and the crop is available for pasture during open spells in the winter. One pound of it is sufficient to sow an acre. Pigs, sheep and cattle also like it.

ANNUAL FLOWERS.—I know of no annual flower more grateful to the grower than the sweet-pea. Give it a rich spot of ground, plant it very early in the spring, depositing the seed rather deep, and gradually filling up or hilling, and you will have pretty, sweet-scented flowers in abundance from the first of July or sooner until frost kills all vegetation in the fall, or until you exhaust the plants' vitality by neglecting to gather the flowers or pick off the seed-pods. The new dwarfs (Cupid), now to be had in all sorts of colors, are fine, too, especially when skilfully grown under glass; but for massing I yet think as much of our common good sorts as of any of the newer and more largely advertised or fancy kinds.

ALYSSUM AND MIGNONETTE.—Other thankful annuals are sweet alyssum and mignonette. I use alyssum as an edging for larger flower-beds. It takes only a few weeks to surround a bed with a ring of white, as the plants grow so quickly from seed and come so soon in flower. They will need shearing or clipping down in midseason in order to give a continuation of bloom when the first crop of seed is being produced. Mignonette is the flower "par excellence" for fragrance, fully equal in this respect, I think, to ten-weeks' stocks, and lasting until the end of the season. It also starts easily from seed, and may be grown in rows a foot apart, or in rings in a round bed, or in bands in a long one. It is a favorite pasture-crop for bees, and I have often wanted to grow it in larger patches for that purpose. I don't know, however, the quality of the honey made from mignonette.

ALSIKE FOR HONEY.—Among cultivated crops which incidentally also yield honey I know of none that can hold the candle to Alsike clover, not even buckwheat. The latter often yields bountifully. Then again it fails. But the honey, even if we get it, is of an extremely low grade—indeed, the lowest in the scale, so far as its market value is concerned. Alsike honey is A No. 1, and if there is any kind of seasonable weather in June we get the fine white clover honey. But outside of this, what an excellent quality of hay one can make of Alsike clover! I know of no better hay than well-cured Alsike cut just when in full bloom. Last year I had some meadows and an old apple orchard where the grass was poor, and in spots entirely absent. In the spring I scattered a little Alsike-clover seed over these patches, and this year was rewarded by having a fine crop of Alsike-clover hay, besides having provided some fine pasture for my bees. The rich, clear white honey resulting from the Alsike fields around me is almost a regular delicacy on my table. If I kept many bees, and had neighbors who were not growing Alsike, I would be tempted to scatter a bushel or two over their pastures and waste places, thus benefiting them as well as myself.

PLANT-BREEDING CONFERENCE.—On September 30th and October 1st and 2d of this year will be held an International Plant-breeding Conference. The place of meeting is to be in the lecture-hall of the Berkeley Lyceum Building, New York City. This promises to be a noted event in horticultural circles. A "preliminary program" is out, and a copy may be secured by addressing the secretary, Leonard Barron, 136 Liberty Street, New York City. Among the papers thus far promised are some covering every branch of horticulture. My lamented friend, the late Prof. E. S. Goff, is announced with two papers—one on "Seedlings of the Native Plum." His genial face and original thoughts and observations will be missed. He was one of the leaders in horticultural research, but he has gone to a better land, where there is no worry over unsolved problems. Professor Bailey is slated for one of his ever-interesting talks; the French horticulturist Vilmorin for a paper on "The Ever-bearing Strawberry," which in view of the recent introduction of large-fruited sorts of that type of berries is an interesting subject; Professor Emerson, of Nebraska, on "Hybrid Beans;" F. W. Rane, of New Hampshire, on "The Muskmelon;" Professor Waugh, of Vermont, on "Hybrid Plums;" Professor Halsted, of New Jersey, on "Plant-breeding in New Jersey;" C. L. Allen, of New York, on "Some Possibilities;" Professor Beach, of the Geneva, N. Y., station, on "The Correlation Between Different Parts of the Plant in Form, Color, Etc.;" besides many papers and addresses on the breeding of different floral creations. Contributions from Luther Burbank and other horticultural giants are also expected. A trip to New York City on this occasion will be amply repaid, at least to any one scientifically interested in all these subjects, or even practically in the breeding of any kind of plant.

Mr. Grundy Says:

PLAIN WORDS.—Whether it is a good idea to use scientific terms in giving the results of experiments at the experiment stations is a question. Many of the words that are so familiar to scientists are Greek to thousands of farmers. And usually, when a farmer sees an article that is plentifully sprinkled with scientific words that he does not fully understand, that article is passed. Ohms and volts are simple enough to an electrician, but they are something most plain people know nothing about. Carbohydrates and protein are words that mean something to those who know their meaning, but to thousands of farmers they are High Dutch.

Not long ago I showed a young farmer an article about certain feed-stuffs, and suggested that he read it carefully, as it contained some information that was of value to him. After reading it he said, "I wonder if this mixture would make a good milk-producer? The article doesn't say whether the mixture is a fat-maker or milk-producer, so I can't tell whether it would be good for milk-cows or for the young steers." Many a man finds himself in the same predicament after reading a station bulletin. "Now let me see," said a farmer of my acquaintance, after reading an article on alfalfa by a station expert, "this alfalfa contains so much fat, so much protein and so much carbohydrates. Is that a good feed for milk or for fat? I wish the fellow had stated how much corn or oats is needed with it to make it a tiptop good feed for my young stock."

A station worker said the farmers ought to learn the meaning of these words and terms, as well as those used in the analysis of fertilizers, so they can understand us. Probably they should; but wouldn't it be better for the station men to use terms that every farmer can understand? The station that does this will find that its bulletins are not only read, but also thoroughly understood. I have noticed that the plainest speaker at a farmers' institute receives the closest attention. The men whose talk is largely made up of technical terms, or who soar into the ethereal regions, are the fellows who "empty the house." An old farmer once said to me that he could make the feeding experiments and determine the matter for himself easier than he could digest the bulletins issued by a certain experiment station. At a farmers' institute a speaker was talking glibly about carbohydrates and protein, and thought he was making a stunning impression on the steady, quiet men before him, when a bald-headed old chap arose and asked him what "them things is for, anyway?" He said he'd been feeding stock about forty years, and he'd never seen one of 'em yet.

EFFECTS OF STORMS.—It is surprising how quickly corn that has been blown down by a storm will right itself again. I had a lot of corn full four feet high blown down nearly flat by a severe wind and rain storm, and it was down so badly that I feared it would stay down, yet in less than a week it stood upright. There is a short crook at the base of the stalks, but the rest is straight as an arrow. The plants are now fully seven feet high. A neighbor had a field of oats just beginning to turn yellow that was laid as flat as if it had been rolled. He gave them up as lost, yet when they were ripe enough to cut they stood up high enough to be cut three ways with the binder. The day after the storm one man sold forty acres of oats for forty dollars. He thought they never would lift even their heads again. The man who bought them cut them easily with a binder, and he will get nearly fifteen hundred bushels of fine, plump oats from the field. After a severe storm has passed over a section one would be led to believe that the crops are utterly ruined; but a few days of fine weather will make a change that is little short of magical. While the apple-trees are being thrashed and whipped about by one of these fierce summer storms it seems as if it would be almost impossible for a single apple to hold on. But most of the best of them do. All that are damaged by worms are thrown off, and the trees are better for it.

The recent heavy rains have shown the weak places in every man's farming. Low land that is not tile-drained is water-logged and cannot be cultivated, while that which has been properly tiled is dry enough to be worked. The steep hillsides are deeply seamed by gullies, and tons of the best soil have been swept into the creeks. It takes a few floods to convince many men that steep hillsides never were made to be cultivated. They make ideal pastures and wood-lots, and the sooner they are converted to these uses the better off will be their owners. Some farmers think they must have their meadows in square fields, and often they have their level lands in grass, and are cultivating the rougher portions of the farm. Many have learned a lesson they will not forget soon. They have lost tons of valuable soil, and have gullies that will take many days' work to fill. Last spring I received a letter from a man who is the owner of a rough farm, in which he explained how he is managing the hillsides. He said, "As you know, my farm is mostly set up on edge, and as I am unable to level it I am doing the best I can to keep it from being washed away by rains and melting snows. I would put it all in grass if I could, but I must have some land on which to grow corn and oats. I am farming the upper part of both hills, and have the lower halves in grass. When a washing storm comes the grass-land catches all the soil that is washed off the cultivated part before it reaches the creek. Just at the foot of both hills I have planted a double row of white-ash trees, putting them three feet apart. They are about twenty feet high now, and they form a barrier that prevents any of my soil from getting away from me. To show how they hold it back I only have to tell you that the side next the hill is already two feet higher than the lower side next the creek. I get fine crops of hay from the grass-land, and always leave the aftermath so that it not only does not wash, but it is safe to catch the soil from above. I find it a good plan."

All Over the Farm

HANDLING NEW POTATOES.—There is no machine that digs a potato satisfactorily before it is fully mature and the skin has hardened. A big area of potatoes goes into market before the tubers are mature, and for the digging I know of nothing better than the hook, fork or long hoe. The method is slow and laborious, but an immature tuber needs careful handling. The potato-box is nearly a necessity—seemingly an absolute one to those of us who have been using them for many years. The heavy home-made box is not desirable. When made of basswood properly sawed it weighs from five to seven pounds, and holds exactly one bushel of potatoes when level full. The potatoes are placed in the boxes as dug, culls being left on the ground, and the boxes are placed in tiers on the wagon when being loaded for market. The bruising is thus reduced to a minimum, and the buyer likes to see his goods come to him in such condition.

The boxes are not used in shipping; but it rarely, if ever, pays to ship immature potatoes to a distant market. When carefully pressed in barrels, with tight canvas covers, they may not be too badly bruised to please the trade, but usually immature stuff presents a sorry appearance in market after shipment by rail. If there is not a local market I prefer to wait until the crop ripens, and take the risk of a lower price. The digging can then be done by a machine, and potatoes can be bulked in cars as soon as the nights become cool. But where the local market is good, marketing early, before the main crop comes in, often pays well, and every grower should have a supply of neat boxes.

DEPTH OF UNDERDRAINS.—These dashing summer rains, pouring down two inches of water within a very brief time, show us that underdrains in heavy soil should not be very deep underground. Where there is a slight depression the water gathers and ruins a crop before it can get down to a tile three feet under the surface. Where the drains are laid deep I have learned the necessity of digging a hole in the lowest part of the basin, and filling up with stone over the tile to the surface; but much land is too flat to make this plan feasible, and the deep drains are not acting nearly as satisfactorily as the shallow ones. If all rain came slowly the deep-laid drain would be far preferable, because it lowers the level of soil-water to a more desirable depth, giving greater feeding-room to plant-roots. But these pouring rains of midsummer drown or scald crops quickly if the water cannot be drawn off at once, and the underdrain should do this work. In a porous soil the water would pass down to a tile three or four feet under the surface without any difficulty; but most soil that is underdrained is naturally tenacious. The claim is made in the text-books on the subject that the soil will increase in porosity as the drains continue to keep surplus water drawn off, but it is my experience that a clay soil does not let the water reach the tile any more quickly in after-years than it does the first year when the soil over the drain is loose. The rains of this summer again impress me with the desirability of keeping underdrains on flat land within thirty inches, or even less, of the surface, if the soil is naturally close and impervious to water.

BARREN CORN-STALKS.—The number of barren corn-stalks in the average field is probably much greater than the grower supposes. Some counting has been done on an extensive scale, and the percentage of barrenness has been found astonishingly high. This is attributable in part to seasonal conditions unfavorable to earing, and often to overcrowding; but the laws of breeding control in plant life as in animal life, and a part of the failure to make an ear is certainly due to inherited traits. Pollen from the barren stalk fertilizes the ear of the fruitful stalk, and the grains from that ear will produce some barren stalks if like produces like. The pedigreed seed-corn that is being placed upon the market at a seemingly high price comes from fields in which all tassels of barren stalks are removed before they scatter any pollen. I believe that this pedigreed corn would be a good purchase at double the price asked, at least in sufficient amount to produce seed for another year; but very many farmers will prefer to use their own corn for planting, and they should keep the tassels of barren stalks cut out. It is quite a task to watch a plat of corn as closely as such work demands; but the patch on which seed-corn is grown need not be large, and it should be separate from the fields. The ears most nearly perfect are used in planting it, and I like to give it extra tillage, because there is gain from any extra vigor secured in the ears. Any weak stalk should be cut out, and the tassel of the barren stalk should never be permitted to perform its natural function. Better seed-corn can be selected from such a plat than can be gotten in the field where there is nothing certain about the parentage of the ear.

IMMATURE POTATOES FOR SEED.—Reasoning from what is known of the laws of plant life, our authorities tell us that immature potatoes do not possess as much vitality as mature ones, and therefore are not desirable for planting. It is quite probable that any strain of potatoes would soon lose in value if immature tubers exclusively were used in its propagation, but the grower finds that such seed is often the very best for a planting. A chief reason for the superiority of unripe seed is the fact that it keeps well until planting-time, being less inclined to sprout than mature tubers. Another advantage from the use of such seed is the rather general inclination to send up very few sprouts from a single seed-piece, whether it be whole or cut, thus limiting the number of vines and sets in the hill. The ripe tuber is more apt to start each bud, and the cutting may have to be too small for best results in order to keep the number of vines small. The second-crop seed of the South, which is usually

quite immature when frost stops growth in the fall, can be planted whole when the potatoes are small without getting an undue number of vines. Probably half of such seed sends up a single sprout, and more than two sprouts is unusual. The tendency of potatoes is to set too freely, and the size of tubers rather than the number is the point we seek to gain.

In the North we are learning to plant some Northern seed very late in the season, so that the crop will not ripen fully, and thus get good seed for planting. This applies to the Ohio Valley states, where there is too much heat for good keeping of an early crop until late spring. It is my observation that seed should not be taken from such potatoes year after year, but a new strain from the North brought in for the late planting for seed. This may indicate that vitality is impaired by use of immature seed; but for a single crop such seed gives most satisfactory results, and its use is increasing.

DAVID.

THE FARM'S FOUNDATION

It may be commonplace to call attention to the most important thing of the farm—its fertility—but now and then these homely commonplaces are not out of place in farm teachings.

We may talk so much about the conservation of moisture that we will forget that if we make our land rich enough, and keep it filled with humus, that it will very largely conserve its own moisture. We may talk so much about the depth of plowing and the kind of tillage we shall give, the use of lime and all the stock subjects until we lose sight of the fact that the crop comes with any depth of plowing and any kind of cultivating if the land is fertile enough.

It is not that all these things I have said we write about are not very good and very important, but all of them together are not as important as the one first principle—fertility.

At some of our institutes I have heard a learned "professor" say that he did not care how poor the land might be, he could raise a good crop if he had all the moisture he desired. He evidently had never seen moisture simply evaporating to waste around the old brick-yards, and not even weeds growing. We all will admit the importance, the necessity, of moisture, but without subdrainage and without active fertility in the shape of humus oceans of moisture and towers of theory will not produce a crop.

How shall we get humus is the question. It is true that from far too many farms the humus has been farmed, washed and limed away. At the bottom of the trouble is ignorant and wicked farming. I do not like to "call names," but a spade is a spade, and ignorant farming should be called so, for there is no excuse for ignorance in this day, when farm papers are so plentiful that one cannot get some of them to stop coming.

But the humus has gone, and to get it back cannot be done in a day or a year, for the restoration of it is an operation in some measure commensurate with the losing of it, and regaining it is a matter of a plan or a policy; and that plan must embrace a rational rotation of crops and plowing down vegetable matter. The desired end may be much more quickly and profitably reached by keeping paying live stock, making plenty of manure, saving it properly, and applying it wisely.

If I have nothing else to occupy land and to be plowed down I will take weeds, and if the land is too poor to raise a fair crop of weeds, as I have had land described to me, for heaven's sake move away from it—life is too short and better land too abundant to fool away time on such land.

But there is no necessity for depending on weeds. As soon as possible we want to get the clovers working for us. They are the farmer's two-handed friend—one hand pulls up and the other down. What the hand pulls down from the air costs us absolutely nothing, and what the other hand pulls up is likewise inexpensive.

To cover the ground in spring, summer and fall, if we cannot get clover to grow, we have willing friends in corn, oats, buckwheat, rape, cow-peas and soy-beans to be plowed under. Then if crimson clover will grow it will work for us through the late fall and winter. If it will not grow, surely rye will.

These crops are listed to be plowed under, but I would put them in the list to feed to profitable animals, the manure saved, some commercial fertilizers bought, and clover coaxed along. But many of these crops may make a good growth in a short time, and produce an immense lot of stuff to turn under. For instance, where wheat follows oats. Immediately after the oats is harvested, if the ground is plowed and sown with half a bushel of corn to the acre, it will grow two, three, four or more feet high before the wheat need be sown. Plow it under green, and work the ground down compactly. The second plowing will give you more fertility than thirty bushels of lime to the acre. You say you haven't time to do this? Then you have more land than you have capital, and that is an unhappy lack of combination.

W. F. McSPANAN.

A WELL FOR A DRAINAGE OUTLET

For several years Mr. E. M. Ogden, of Iowa, has been trying to get an outlet for tiling in the regular way. He has now a force of men at work boring a twenty-two-inch well in the middle of the basin. The theory is that a good well will stand as much inflow as can be pumped out, and the well will be sunk until a good vein is found. Then tile will be laid from all directions to the well, and a good system of drainage will be established. It is said that some farms have been drained in this way in Illinois, but the experiment is new in Iowa, and is being watched with much interest.—Drainage Journal.

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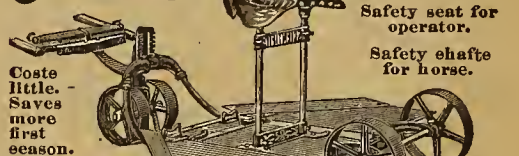
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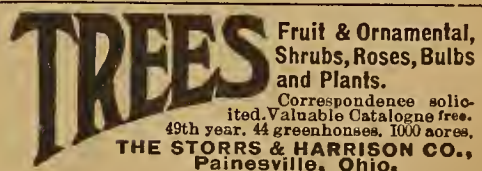
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A GOOD WOMAN FARMER

MISS ABBIE PEFFER, daughter of the late Phillip Peffer, of Penn Township, St. Joseph County, Ind., and niece of ex-Senator W. A. Peffer, of Kansas, for several years, or since the death of her father, has been the manager of the old homestead in Penn Township, famous for its fruit and vegetables. She has managed it successfully, too, and the Peffer strawberries this season have been the finest seen in this market.

Miss Peffer, who has the care of an aged and invalid mother, not only attends personally to all the business connected with the large farm, but she has done the greater share of the labor in the fields and vineyards this season. She has plowed many acres and planted them to corn and potatoes with her own hands, and her crops are all in a thriving condition. This is only proof of what an energetic woman can do if she only has a disposition to work. Miss Peffer says that she finds good farm-hands very difficult to get and so she was compelled to perform the greater share of the labor required on the farm. Aside from this she takes her produce to the market, and attends personally to its sale.

R. A. REED.

WHAT CONSTITUTES A BUSHEL OF CORN

In the North when a bushel of corn is bought or sold it means, or should mean, a bushel of grain—that is, of shelled corn. As a rule a bushel of ears of corn weighs from sixty-eight to seventy-five pounds, according to the variety. If when shelled the grain weighs fifty-six pounds and the cob fourteen pounds, then seventy pounds of ears will be for that crop equivalent to a bushel of shelled corn. A bushel of shelled corn in most of the states, as fixed by law, is fifty-six pounds, though in New York it is made fifty-eight pounds, and in some localities sixty pounds.

In 1870 a law was enacted by the Indiana legislature that seventy pounds of ear corn should be taken as a bushel until December 1st following the gathering of the crop, and sixty-eight pounds on and after December 1st. This regulation might answer the purpose in ordinary seasons, but if in the fall and winter an unusual degree of humidity prevailed, the purchaser if governed by the law referred to would suffer a serious loss if he purchased in large quantities. Ear corn varies materially in dryness. The same crib and the same corn may amount to one hundred bushels at one time, but it would amount to only ninety bushels a few months later.

It is interesting to note the legal weight of corn in some of the Southern states, where the best method of protecting the corn from the attacks of the weevil, as well as from rats, is to crib the corn with the husks on. The legal weight of corn, for instance, in the state of Tennessee is as follows: Shelled corn, fifty-six pounds to the bushel; in the ear, shucked, seventy pounds; unshucked, seventy-six pounds; green, with the shucks on, one hundred pounds. For pop-corn seventy pounds is required for a bushel. In the barrel method of buying and selling in the same state, provided the corn with the shucks on is fully matured, five bushels are required for a barrel.

J. W.

NOTES ON PAINTING

When a building has stood long enough without paint to become weather-beaten the clapboards will be more or less warped, and many of them split at the ends where the nails hold the boards in place. Before the painting is done, provide yourself with a hammer and nails, principally shingle-nails, with a few sixes and eights, and also with appliances which will enable you to get at the work. Hit every nail a blow which will draw in the shrunken clapboard and make it lie close to its fellow. If any nails are missing use the eights except at the ends, where you should use shingle-nails and sixes. At the ends you will find the nails are put in half an inch from the edge and about one inch from the ends of the boards. When the board shrinks and warps it is liable to split and gap open. It will do but little good to fill the splits with putty. In the first place, put your thumb against the lower edge of the split piece, and if you can press it in place so that it will lie closely to the main part of the board, drive a shingle-nail from the lower edge upward through the split piece into the main part of the board, drive in a six half an inch above the split, and drive a shingle-nail through the center of the split piece about an inch from the end. Then drive the original nail to a level with the board. If you cannot press the split piece into place on account of the old nail, drive the nail in out of the way with the hammer and nail-set, then proceed as above.

Next put the priming on. This is best done with clear linseed-oil, because you cannot put a coat of paint on an old, dry, weather-beaten building without showing laps where the paint is double, because it sets so quickly. With a coat of clear linseed-oil the pores of the wood will be sealed sufficiently to hold out the oil of the next coat, so that you can put it on smoothly and evenly.

When the coat of oil is dry, carefully putty the job. Mix the next coat with lead and boiled linseed-oil, and put in twenty-five per cent of turpentine. Mix this coat fairly heavy, and spread out well.

Mix the next coat with white lead and linseed-oil and ten per cent of zinc-white, and color as desired. Use no turpentine in this coat. Mix it as heavy as you can and have it spread easily. Care in spreading makes economy in material.

When you mix zinc with lead, break up and mix the two in separate kegs to a proper consistency for paint-

In the Field

ing, then mix the two. This is necessary, because the zinc is so much lighter than the lead.

If you paint the building white, trim with dark olive-green, which you can make by adding one ounce of burnt umber and one ounce of medium chrome-yellow to one pound of chrome-green, more or less according to the strength of the chrome-green. I make this statement because the chrome-green found on the market varies so much in color-strength. A white house trimmed with Venetian red, or a light green made by reducing chrome-green with white lead, looks very well in either case.

If you wish a buff or cream-color, mix yellow ochre with white lead for the body of a house, and trim with light gray, made by tinting white lead with lamp-black and a little yellow ochre or Venetian red. A house painted with this gray and trimmed with white gives the house a cool, fresh-looking appearance. A house painted cream or buff, trimmed with white, looks fresh and mellow, especially if surrounded by trees.

If there are blinds, or shutters, on the house, paint them the same color as the trimming, but have them somewhat lighter.

Painting blinds is a slow job for most painters. An expert blind-painter can paint twenty pairs of six-foot blinds in ten hours by putting in his "best licks," but the average painter will not do more than ten or twelve pairs in a day. To paint blinds rapidly, lay the blind on two horses, that side up on which is the opening-rod. First turn the slats up edgewise, then paint the opening-rod; next draw your brush quickly across the ends of the slats, next across the edges, then close the slats down flat and rapidly paint the sides by running your brush crosswise; while doing this take in the edge of the stiles and rails, then with the point of your brush paint the edges of the stiles between the ends of the slats. With a few rapid strokes paint the entire framework of the side of the blind you have up, with the exception of a few inches of the stiles two feet from the lower end of the blind, which you leave for convenience in handling. Turn the blind over, and turn the slats up edgewise; next draw your brush across the ends of the slats, then across the edges; turn the slats as far as they will go, and rapidly draw the brush crosswise over them; close them down, paint that side across the slats, and proceed with the frame the same as you did when painting the other side. Now open the slats, and lay off the paint on both sides by brushing lengthwise of the slats. Next set the blind off bottom end up, and proceed to wipe up the paint and finish the stiles. Have some support to lean the blind against, turn the slats so they will lay flat, and leave them that way until dry. The perfectness of the job will depend largely upon the care exercised in wiping up the work after the blind is set on end.

A house which has been painted so long that the paint is dry and cracked or chalking should be painted the same as described for the weather-beaten house.

A new house may be primed with a coat of lead and oil mixed in the proportion of five pounds of lead to one gallon of oil. Great care should be exercised in putting on this coat; brush it well into the wood, and work it into the nail-holes and all other places needing putty, and the putty will stay where you put it.

V. B. GRINNELL.

WHEAT-FIELDS OF THE NORTHWEST

The annual wheat crop of the United States approximates five hundred and twenty-three million bushels, twelve per cent of which is produced in the states of Washington and Oregon. The wheat-kings of those states operate single farms extending as far as the eye can see from the central ranch-houses, and including several sections of land. When the price of wheat ranges at or above fifty cents a bushel individual owners may be induced to dispose of one hundred thousand bushels and still retain enough for seed and to hold for higher prices. Many great fortunes have been made and lost in wheat-farming, and some of the finest diamonds the world produces are worn by the wheat-men of the Inland Empire.

The country included in portions of the northwest states lying between the Cascades and Rocky Mountains is frequently referred to as the Inland Empire. It is a land of wheat, where at least fifty million bushels of the world's breadstuff matures and is threshed, and marketed on the Pacific coast, in the islands of the Orient or the gold-fields of Alaska. In the semi-desert bunch-grass lands of the Columbia and Snake River basins or far up on the beautiful Blue Mountain slopes may be seen the vast expanse of waving grain, and stacks of straw or stubble. Here are the massive combined harvesters and threshers, hauled over the mountains by sixteen horses, manned by five people, and cutting, threshing and sacking twenty acres of wheat daily.

Harvesting begins in the Umatilla Valley of Oregon about July 4th, and concludes in the Palouse fields of eastern Washington after the first snowfall in October. Hundreds of transient men and boys follow up the harvest calendar, engaging in various occupations demanded during the busy season. The wheat ripens at the proper time, and stands in the fields with but little damage from shattering until the crews of harvesters reach the district. All that shows a yield of over six-

teen bushels, the approximate cost of growing and harvesting an acre, is cared for, and the sacks placed in warehouses or stacked along the railroad ready for shipment when the prices are satisfactory.

An extensive wheat-farm in this vast domain is one of the most deserted and forbidding places in the entire

West except during the season of plowing, seeding or harvesting. Far away over ravines, up the mountain slopes, across the streams or cañons is one continued broad expanse of waving grain, desolate fields or busy base of operations. During the winter months the country is deserted, and nothing but the hungry coyotes and long-eared rabbits enter the precincts of desolation. In the summer months water is hauled from twenty to thirty miles for some of the farms, and everything closes down to await the incoming of the water-wagon after the dust is noticed five miles away.

The more advanced farmers have adopted a novel plan of digging cisterns, and filling them with snow during the winter months. When the spring opens and the snow melts, the cemented cisterns have water for domestic and culinary use throughout the summer and fall. Women and children are seldom seen in the wheat-farming districts, as they live in the adjacent towns or cities, and know but little of the operations on the ranches. Cows are dispensed with, pigs have no abiding-place, and poultry is not wanted on the big farms. One may stand on a single farm and gaze in every direction for the evidence of a tree, bush or spring, and return to the cabin in disgust at the unvaried, monotonous sight of wheat to the right, wheat to the left, wheat in front and wheat to the rear.

The expense of producing and marketing an acre of winter wheat in the Northwest averages about eight dollars. All above this is regarded as profit. Some fields return twenty to thirty bushels, and in the rich foothills of the mountains as much as fifty bushels are threshed from an acre. Those owning farms ranging about five thousand acres are better prepared for reducing expenses; and in some instances the cost of seeding, harvesting and threshing an acre does not exceed the value of twelve bushels of fifty-cent wheat. Those men are the wheat-kings of the Inland Empire. They have immense deposits in the banks, and are continually purchasing more land to grow more wheat.

Wheat-growing depends largely on the precipitation of moisture in winter and early spring months, as no rain falls on the crop after April. Where the rainfall is equivalent to twenty inches or more the variety known as "Little Club" is grown successfully. In districts where the precipitation of moisture is less than fifteen inches annually the "Blue Stem" is the popular wheat. Entire failures are seldom recorded, but hot winds frequently blow over the arid fields and cut short the yield to one half or even less the ordinary, good-season crop. The entire work is considered a gambling venture, and those who lose their crops are generally protected by the bankers for another season, when they have bountiful harvests and become financially independent. Prudent growers consider the probability of a crop failure, and carefully plan their operations so that the loss of a crop will not ruin them.

The wheat of the Northwest is marketed in sacks manufactured at the Washington State Penitentiary. These are made of jute, which comes from Calcutta, India, and contain about one hundred and forty pounds of clean wheat. The grain is shipped in specially chartered vessels to Liverpool at a cost of thirty cents a bushel. Flour goes to the cities of the Orient and the Alaskan gold-fields. The grain being of the winter varieties contains a good proportion of gluten and food elements, and the flour compares favorably with that of similar grown cereals of other sections of the Northwest. The seed comes originally from New Zealand, and is selected because of its adaptability for fall or spring planting.

Land to be used for wheat rests every second year, under the universal system of summer fallowing. This requires the owning of farms double the area to be sown each year, and adds to the expense of wheat-growing. During a favorable spring the grain left in the stubble germinates and makes a fair crop if not plowed under. Thus the Walla Walla Valley of Washington boasts of having at least one farm that has produced sixty-six bushels an acre from the original sowing, and a volunteer crop of forty bushels, making the yield from one sowing reach the enormous proportions of one hundred and six bushels. One of the bench wheat farmers of eastern Washington claims to have harvested fifty-one thousand bushels of wheat from one thousand acres. This is said to be the largest individual yield from a larger area ever reported in the United States.

The story of a grain of wheat from its planting to the flour of China contains an interesting and ever-surprising store of reminiscences. It is sown by machines prepared especially for the purpose, after the land has been steam-plowed and suitably prepared for its reception. The moisture retained in the earth from the snows of winter, with the heat of early spring, causes rapid growth and the escape of drought, which characterizes the summer and fall months. The heads are clipped and elevated to the threshers, and the grain extracted and sacked ready for market. The mills crush the grain into flour, and it is consumed in the homes of seven hundred million orientals, where it has taken the place of rice. Thousands of acres possessing no value except for wheat-growing are thus utilized, and the owners are made wealthy.

JOEL SHOMAKER.

Gardening

By T. GREINER

THE FALL GARDEN.—It's as easy to have a good fall garden as to have a good spring garden. In order to have it, however, you must not neglect to plant during the summer. We want lettuce in September and October, and at that time it is especially enjoyable. Sow lettuce-seed now, also seed of spinach, early table-beets, turnips of the flat sorts, winter radishes, kale, etc.

CAULIFLOWERS IN VIRGINIA.—C. D., of Suffolk County, N. Y., asks what section of Virginia would be most suitable for raising cauliflowers on a large scale. It is desired to set out the plants about September 1st, and to market the crop after December 1st. The great trucking region of Virginia which caters to Northern markets is around Norfolk, and I can hardly imagine a locality better suited to the production of good crops of any member of the Brassica tribe, such as cabbage, cauliflower, kale, collard, etc. Probably a location near the mouth of the James River might answer for the same business, but my first preference would be for the first-named locality. Always bear in mind, too, that the great need of both cabbage and cauliflower crops is potash, and that the muriate form is well suited for it. Kainit if applied early enough might do.

SPRAYING WITHOUT CEASING.—The advice to "keep potatoes, grapes, trees, etc., covered with a protecting coat of Bordeaux mixture" is sometimes more easily given than taken; and when one wants to try to live up to it, it means hard and unceasing efforts in such weather as we have been having this season. I have been more than anxious to keep my potato-vines sprayed with protecting liquids, but the frequent, almost daily, rains washed the stuff off to some extent faster than I could put it on. It must be said, however, that judging from appearances thus far this cool, wet weather has been favorable to the potato-vines rather than otherwise. Yet with hot, dry weather following, as we expect, we must take particular precautions to keep the vines from blighting. The beetles and slugs have had little chance. However, it is possible that blights may yet do much injury, so I continue to apply the "protecting coat."

BOXAL AND PYROX.—"Boxal kills potato-bugs" is the headline of an advertisement in the agricultural papers. I have used this "Boxal," and it surely keeps the potato-beetles and their progeny off my vines. But so would plain Paris-green water, or any other mixture to which Paris green or arsenic in some form has been added. Of such a spraying-mixture we expect more than the mere killing of insects. We must keep the blight off, too. I expect, and hope, "Boxal" will do it. The color of this mixture differs somewhat from "Pyrox," which is a prepared Bordeaux mixture combined with some arsenical poison. I am unable to see as yet why we should use a different mixture for potatoes from what we use for fruit-trees, etc., especially as the directions say that "Pyrox may be used for any purpose that Bordeaux mixture combined with some arsenical poison is used for." What can "Boxal" be if not a ready-made Bordeaux mixture combined with some poison? Will the manufacturers explain?

ALPINE EVERBEARING STRAWBERRIES.—A reader asks me about the Alpines, and where plants can be had, etc. When you want quantity the Alpine Everbearing is not the strawberry for you. It gives only a small crop of rather small berries, but these are high-colored and of most excellent quality and fine aroma. I like to have a bed of them on the place. Plants are easily secured from a number of nurserymen and seedsmen. Some of the latter offer them under high-sounding names and extravagant claims. The bulk of the crop comes in the ordinary strawberry-season, but later on we get only a few scattering berries. Indeed, our other common varieties often yield only a small crop in late fall. Whenever you can get a dish of the Alpines, however, they are most delicious. A year or two ago several French large-fruited everbearing sorts were introduced by a New York seed firm. I've got two of these in my garden. They give a moderate crop of fair-sized berries, but I get these only in the regular strawberry-season. In short, on my grounds they fail to assert their everbearing character, and I do not know that I have any particular use for them.

APPLYING SPRAY-MIXTURES.—Convenient, yes, "deliciously convenient," as Professor Slingerland, of Cornell, puts it in his testimonial, it is to have the spray-mixtures ready for dilution and immediate application, as we have them in "Pyrox" in "Boxal" and in "Bodo," as named by the manufacturers. In these times, when we have only now and then a let up of the rainy spells, so that we must be prepared to do some spraying at any time that the weather may take a favorable turn, spray-mixtures should be kept continuously in readiness, and I know of no better form in which to keep them on hand than in those of the aforesaid "Pyrox," "Boxal" and "Bodo." It is not the cheapest form in which we can apply spraying-mixtures, by any means, and people economically inclined will prefer to make their own Bordeaux mixtures after the approved formulae. It will be far more profitable, however, to spray with the manufacturers' ready-made articles than neglect to spray simply because it seems inconvenient to keep the home-made mixtures in readiness. It took me about half a day recently to spray about three fourths of an acre of potatoes, part of them early ones, with very large and thrifty vines, the remainder late-planted late ones, and yet very small. The spraying was done with the knapsack sprayer, and the mixtures were made by diluting "Pyrox" as fast as needed to fill the knapsack. For a strong person it is not particularly hard work to carry and work the knapsack even for a much longer time, but too much for a youngster or for a weakling. Very satisfactory work, however, can be done in this way.

THE STRAWBERRY CROP.—Cool weather has made the strawberry crop somewhat later than in average seasons; but the abundant supply of rain we had right through the strawberry-time also helped to develop and fill out the later berries, and thus to prolong the season. My best berry, although not the earliest, was again the Brandywine. This yielded its large, regular and well-covered fruit in great abundance, and even at this date (July 8th) there is plenty of good fruit to be had, and will be for a couple of days longer. The quality is good enough for anybody. Wilson, our old canning favorite, does not hold the candle to it in yield. Good authorities had spoken so well of the Clyde that I was induced to set some plants last year. It bears a good crop of regular berries, but it is not up to the Brandywine in point of color, nor of quality. Rough Rider did much better this year than last year (its first trial). The fruit is even later than Brandywine. At present some of the plants appear yet loaded down with well-colored, large-sized and regular berries. It is fairly solid, too, and I can imagine places where it would be profitable to grow and sell it. But my better-half says people of discriminating taste would not buy it the second time. It is quite flat in taste compared with Brandywine. My neighbor has a big patch of Gandy, which does remarkably well with him, and has proved very profitable. With this variety he finds himself just now only in the middle of the picking-season. For a first early of course we must have Michael's Early. High quality is of less consideration in its case, for when the first berries come to the table they taste good anyway, and we are not inclined to be excessively critical at that time.

Fruit-Growing

By S. B. GREEN

CURLY-LEAF OF RASPBERRIES.—N. W. A., Wayzata, Minn. Replying to your inquiry, there is no remedy known for curly-leaf of raspberries. Some varieties are much more subject to it than others, and the only way to avoid this disease is to plant kinds that are nearly immune from it. Land which has had the curly-leaf disease on it is very liable to give it to a subsequent crop which may be planted on it within a year or two following.

CATALPA-WORM.—H. T. T., Coalton, Ohio. Your description of your tree leaves no doubt in my mind as to its being a true catalpa. I am not so certain about the worm which is eating the foliage, but the remedy for it would be spraying with a mixture of one pound of Paris green to one hundred and fifty gallons of water; or, if more convenient, use it at the rate of one pound of Paris green to thirty pounds of flour, and dust on the foliage early in the morning when it is still moist from the dew of the night before. If you will send me some of the worms I think I can find out the name of it for you.

SEEDLING STOCKS.—R. U., Box, Okla. Mahaleb seedlings are generally imported from France, and may be obtained through any of the large nurseries or by importing directly. They are used as stocks for cherries, and especially the sour cherries. Neither the peach nor the plum should be propagated on these roots. For the peach the best stock is seedlings of the wild peach of Tennessee and Kentucky, and of plums, myrobalan in the case of those of the domestica class; those of native origin, however, should be propagated upon stocks of a similar kind. For this purpose it is customary to use *P. maritima* for the Southern types and *P. Americana* for the Northern types.

TWIG-BLIGHT OF APPLE.—T. S., St. Paul, Minn. The letter from D. McL. inclosed with the sample of blighted wood and foliage from an apple-tree is at hand. It is quite plain to my mind that this tree has been injured by one of the forms of fire-blight. Spraying with kerosene emulsion or Paris green will do no good whatever, and spraying with Bordeaux mixture is too costly and uncertain to warrant its use. This disease is most liable to attack any but rapidly growing fruit-trees. Some varieties are subject to it much more than others, and the best way of avoiding it is to plant those which are known as blight-proof sorts. There are no varieties which are entirely immune to this disease.

FIG-FLOWERS.—N. K., Minneapolis, Minn. The leaf which you inclose is evidently that of a fig. To all appearances the fig does not have any flowers. The bud apparently pushes out and continues to enlarge until it develops into a fig. The same is true of the rubber-plant and of the banyan, which are near relatives of this fruit. While to all appearances it has no flowers, it has very many of them, and the ordinary fig is the product of a very large number of flowers, which are borne on the inside of the fruit. Both staminate and pistillate flowers are found within it. There is an opening at the end of every fig, by means of which the flowers are pollenized, and by which insects enter and pollinate them.

GRASSHOPPERS.—J. V. K., Denver, Col. The best method of destroying grasshoppers after they have hatched out is to use what is known as the "hopper-doser." This is an arrangement that has been widely used in this country for killing this insect. It is made of a full sheet of sheet-iron turned up about one inch all around. In the bottom of it about one fourth of an inch of kerosene is put. This machine is then dragged over the land with a horse. The grasshoppers will hop into it, then hop out again, and at first glance you may think you are not injuring any, but all those that touch the kerosene will die as soon as the oil can spread over their bodies. This insect generally lays its eggs in sandy soil, and if this is plowed late in the autumn, so as to turn the egg-masses bottom side up, the young destroyers of vegetation will be unable to get out, and consequently they will be destroyed in large quantities.

COVERING BLACK-RASPBERRY TIPS.—F. J. F., Osage, Iowa. The best time to cover black-raspberry tips is generally about the middle of August, as by that time the tips have bent over and have nearly, or quite, reached the ground. They should then be covered by inserting them straight downward into the ground, making a place for them by inserting a spade. They should be covered about six inches deep. The same results may be accomplished by laying them sideways, and covering them; but they will often continue to grow, the end pushing through the covering, and you will not get as good results as when they are inserted straight into the ground. The tips will be rooted in the course of a few weeks, and should be taken up late in autumn and heeled in if the plants are to be laid on the ground in winter; otherwise it is best to leave them attached to the plant over winter, as they generally come through in better shape when not cut off.

ANTS ON TREES.—J. P. M. The ants on your plum-trees probably go there to feed on the honey-dew that is secreted by the lice. Sometimes, however, they are quite injurious to trees by working around the roots, and occasionally even by feeding on them. The best way of destroying them is to use large quantities of scalding water wherever the nests can be found. If the nests cannot be found, quite a satisfactory way of keeping them out of the trees is by putting a piece of tin or building-paper around the tree, and covering it with printer's ink, which will keep them from ascending the trees so long as the material has a fresh surface. Bisulphid of carbon is also used for killing ants and similar insects. In such case, when the nest is found, pour a little bisulphid of carbon on a piece of cotton batting, and lay on the nest, covering it so that the fumes cannot pass off. Treated in this way the fumes will penetrate the nest, and thus kill the ants. They may also be caught by laying corn-cobs dipped in molasses near the tree, and when covered with ants putting in kerosene or boiling water, and repeating the operation until all are trapped.

THINNING PINE-TREES.—C. N. H., Rush City, Minn. I cannot tell from your letter whether your pine-trees need to be thinned or not, but am inclined to think that they will be helped by pruning. Your white-pine trees four to six inches in diameter are probably fourteen to eighteen years old. The chances are that if they are properly looked after they will be three times as large in fourteen years more, and it will pay you to hold on to them. They should now be growing very rapidly. It is important, however, to allow pine-trees to crowd one another sufficiently to kill out the lower branches, as in this way the greatest amount of good timber is formed in the shortest time. While if the trees are allowed to spread they make large side branches, which means small upward growth and big knots. However, this crowding can be too severe when it hurts the whole stand. I should think they ought to stand on an average about six feet apart in every direction. If the lower branches have died out it would be a good plan to remove them; but in doing so be careful not to cut into the tree. It is not customary, however, to do this in growing this tree for lumber. If the lower limbs have not died out you may be sure that there is sufficient room between the trees, and no thinning should be done until the branches begin to die six or eight feet from the ground.

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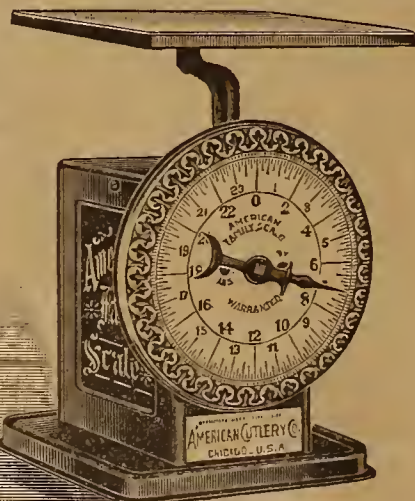
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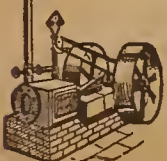
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Live Stock and Dairy

TO PREVENT A COW FROM SUCKING

HERE is a little device that is often effectual in a case of misappropriation of another cow's milk. Take a piece of No. 12 wire one foot long, sharpen the ends, bend it into a loop like the illustration, put it through the brute's nose like a bull-ring, and twist the ends together; leave the points projecting forward. This arrangement will embarrass the sucker and punch the suckee, and generally stop the business.—D. M., in Hoard's Dairyman.



WHITE BUTTER AND OLEO

The new oleomargarine law went into effect July 1st. Oleomargarine is now the color of white tallow. A great deal of farm butter has come to this market [Chicago] so light in color as to be mistaken by consumers for oleomargarine.

Kindly advise your readers that unless they want their butter sold as packing stock it must resemble June butter. Otherwise consumers in the cities, because of the repeated misrepresentations made to them, will believe it to be oleomargarine, and refuse to buy it.

If uncolored or white butter is made in future, it will entirely counteract the effects of the new law, because if people become accustomed to eating white butter they will easily be deceived by oleomargarine swindles. The salvation of the butter business depends upon keeping up the standard color of butter to distinguish it from oleomargarine.—Chas. Y. Knight, Secretary National Dairy Union.

THE FARM DAIRY

In dairying on the ordinary farm one meets with a wider diversity of conditions than in a location especially selected for the purpose. Close proximity to a good market for the products of the dairy is an important feature.

In many sections where there are creameries which depend upon the farmers surrounding distant towns for their supply of cream, arrangements are made with the transportation companies for the cheap shipping of cream and the return of the cans. Competition of rival creameries often renders it possible in such localities for the farmer to realize more profit by extracting the cream with a separator and shipping it to the creamery than to keep it on the farm and do his own butter-making. In this case the skim-milk is undiluted, and may be fed to calves or hogs, with the addition of a little oil-meal for the calves, or shorts for the hogs, to form an excellent growing ration.

A farm dairy with fifteen or twenty cows and growing stock to utilize the by-products to the best advantage, even if the cream is made into butter at home, will pay better with the aid of a good separator than without it. The labor of keeping the separator clean—which is absolutely necessary—is more than offset by the saving in time, the improved quality of the butter and the better feeding condition of the milk.

A good house is a paying investment, and should be built with a view to furnishing the desirable temperature and thorough ventilation. Cream should be churned at a temperature of from sixty degrees to sixty-five degrees. Ordinarily the butter is firm and requires but a dash of cold water after the buttermilk has been drawn off and before removing the butter from the churn. Pour in enough water to cover the butter, give the churn a few turns, then draw off the water and take up the butter. Use fine dairy-salt for salting, and press out the water carefully while working, to avoid injuring the globules. Wring cloths from cold water and lay over the butter after packing, place in a cool position in the milk-house or cellar, and your butter will keep fresh for some time.

It is very convenient to have ice stored for use during the hot summer months, when the average farm butter is of an exceedingly poor quality. Not only does it pay from a mercenary point of view, but the farmer's own table will be the richer and better for this simple aid in preserving the cream, milk and butter for use in the best possible condition.

A good dairy is a luxury on the farm. There is cream for fruit and coffee, butter for cooking and eating on bread, milk to drink, and ways innumerable to utilize its products.

Regularity, cleanliness and good cows are all important factors in successful dairying.

C. B. BARRETT.

THE MANNERS OF A HORSE

The breeder and seller of horses does not need to be told that manners, good or bad, make or mar the horse and his value. The better the horse, the more his value is enhanced by proper training. Saddlers, fancy drivers, coaches and carriage-pairs may all be ever so perfect in form, coloring and action and yet fail to bring anything like their inherent value simply because of bad manners or tricks.

The training required for city and farm uses are so different that unless attention is given to the subject there will be no inconsiderable loss from this source when the colts, which are used for farm-work while maturing, are put upon the market. The colts trained only for farm-work are nearly always awkward and lawless when changed to city environments. If allowed to get undesirable traits and habits while young much time and expense become necessary to undo the early training, or lack of it, after getting into the hands of the city dealer.

The city horse, unlike the farm-horse, needs to know nothing of word or voice driving, which training adds much to the value and convenience in farm-work. Where the noise and confusion are frequently so great, the city horse must depend entirely on the reins and whip for his instructions. He must know that his place is always up against the bit when at work, and must turn and swing from side to side at instant pressure of the rein. He must also be ready to dart forward or pull up just as suddenly to avoid the numberless rushing cars and vehicles often thronging the streets of traffic and driveways. To do all this successfully and avoid collisions he must learn to keep a straight backbone—that is, not to swing his head when making a turn, but turn his whole body just as if he were hung on a pivot. He must also know the use of the whip, and not lose his head and become unmanageable when touched up suddenly to avoid mishaps. All of these must be known and responded to without a syllable from the driver before the horse is safe and really valuable for city use. Of course, besides, he must be fearless, or at least face without flinching anything from a steam-calliope to a motor-vehicle going at a hair-raising pace. In a word, the horse to be really valuable for city use must pay instant attention to the smallest demands of his driver while at work, whether under the saddle, on the pole or between shafts.

In the suburban town in which I am staying at present there are hundreds of horses owned by metropolitan magnates which are only saved from being considered "plugs" by their elegant harness, trappings and the exceptionally good care given them. Many of these wealthy merchants would be willing and eager to pay fancy prices for better animals could they get them perfectly trained and safe—a combination not so easily found among horses of good looks, mettle and performance. Good manners coupled with good appearance command a premium from long-pursed city buyers, and the breeder or farmer who gives extra care to producing these qualities in his horses usually gets a large reward for his trouble.

B. F. W. T.

Live Stock and Dairy

IOWA EXPERIMENTAL CATTLE SOLD

AN INTERESTING feature of the live-stock market in Chicago June 16th was the sale of the two hundred and twenty head of range-bred steers which were in the feeding experiment conducted by the Iowa Experiment Station to test the relative merits of several supplementary foods used with a main ration of corn-meal. They were fed for ninety-five days on the Cook ranch in Sac County, Iowa, by R. J. Kinzer under direction of the station. Nelson Morris & Co. purchased the bunch for twenty thousand one hundred dollars. The steers were



SHROPSHIRE EWE LAMB

Owned by the Ontario Agricultural College

divided into eleven lots, each lot being yarded by itself. The average weight of each lot, the supplementary feed used and the valuation as determined by a committee of the leading buyers at the yards are given in the following table:

| LOT | SUPPLEMENTARY FEED | HEAD | AVERAGE WEIGHT | PRICE |
|-------|-------------------------------|------|----------------|--------|
| I. | None | 19 | 1,244 lbs. | \$7.45 |
| II. | Oil-meal | 20 | 1,295 lbs. | 7.50 |
| III. | Cotton-seed meal | 22 | 1,292 lbs. | 7.40 |
| IV. | Gluten-meal | 19 | 1,321 lbs. | 7.65 |
| V. | Gluten-feed | 20 | 1,276 lbs. | 7.60 |
| VI. | Germ-oil meal..... | 20 | 1,265 lbs. | 7.40 |
| VII. | Blood-meal | 20 | 1,253 lbs. | 7.60 |
| VIII. | Iowa Stock Food..... | 20 | 1,201 lbs. | 7.40 |
| IX. | International Stock Food..... | 20 | 1,167 lbs. | 7.20 |
| X. | Standard Stock Food..... | 20 | 1,198 lbs. | 7.00 |
| XI. | Pasture | 20 | 1,240 lbs. | 7.55 |

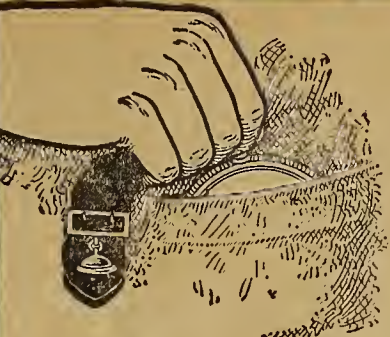
Each lot of steers consumed daily a given amount of corn-meal, and wheat straw was supplied as roughage. Water and salt were always accessible. The weight of the steers at the beginning and the average gain made have not been made known. The figures given in the table show the beef-making qualities of the various foods. Details of the test from the selection of the cattle by Prof. F. R. Marshall and their purchase by Mr. Cook in Nebraska last fall to the valuation of the dressed carcasses in the refrigerator in Chicago June 16th will be published in a few weeks in bulletin form by the Iowa Experiment Station. The prices paid for the steers were very satisfactory to the station officials. Gluten-meal certainly produced good results in weight and finish in Lot IV., and the blood-meal lot fed out well. Very little difference was noticeable in several



LEICESTER EWE

Owned by the Ontario Agricultural College

lots. Lot XI. furnished evidence that blue-grass is fully entitled to the high position it occupies among beef-making feeds. All the steers were very ordinary when purchased and fully as ordinary when sold. Uniformity was lacking in each lot. Heterogeneous in breed, age, size and type, these steers were representative of the class of cattle contributed to the Chicago market from farms every year. To Prof. W. J. Kennedy of the Iowa station is due the credit for originating this important feeding experiment, and it is an encouraging sign of the times that Mr. Albert E. Cook, impressed with the idea and ever ready to advance the agricultural interests of his state, purchased the cattle and arranged suitable feeding-lots for them on Brookmont Farm.—The Breeder's Gazette.




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with knowledge of farm stock and fair education to work in an office, \$60 a month with advancement; steady employment; must be honest and reliable. Branch offices of the association are being established in each state. Apply at once, giving full particulars. The Veterinary Science Ass'n, London, Canada.

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A marvelous, new invention, three times as fast and easy as any other egg-beater or cream- whip ever invented. At the same time it is so simple that it cannot possibly, by any chance, get out of order. Another point of greatest excellence is that it can be cleaned thoroughly in an instant, for there are no bearings or wheels in which the material to be beaten can collect. It operates simply and easily, and is the

MOST RAPID BEATER

or whip known. It does not require to be held hard against the bottom of the dish, thus running any risk of breaking glass or china. There are no parts about the beater that can break. It is made of the most durable material, and has no glass parts whatever. Sent by mail, prepaid. Order as No. 821.

We Will Send This Egg-Beater FREE for Sending Only TWO Yearly Subscriptions, New or Renewal, to the Farm and Fireside; or

We Will Send the Farm and Fireside One Year, New or Renewal, and This Egg-Beater for Only 40 Cents.

(When this offer is accepted no cash commission can be allowed, and the name cannot count in a club toward a premium)

Any one accepting this offer is also entitled to one free count in the Dot Contest on Page 19 of this paper. Address

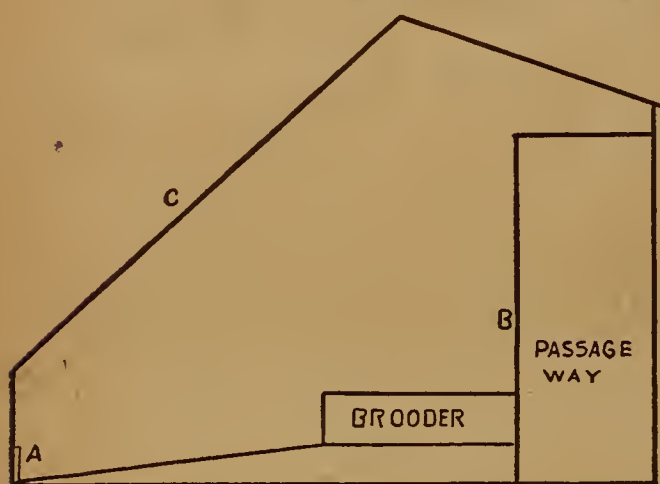
FARM AND FIRESIDE, Springfield, Ohio

ABSORBENTS FOR DROPPINGS

ONE of the best absorbents of the droppings is kainit (German potash salts). It is sulphate of potash in a crude form, is soluble, and serves better than plaster for "fixing" the volatile matter. If the kainit in conjunction with dry dirt is used freely under the roosts as an absorbent, and cleaned up with the droppings, the two form a combination that is superior to either alone, as chemical changes and reactions not only render inert substances soluble, but make the whole more available as plant-food.

BROODER-HOUSE—EIGHT DIVISIONS

The brooder-house illustrated on this page is from a photograph of one constructed in New Jersey. It will be noticed that muslin windows, which slide up or down, are used, the brooders being single and heated with lamps. The brooder is fully illustrated and described in detail in the "New and Complete Poultry Book," and it can be made for a small sum, hundreds being in use, the right to publish the designs



BROODER-HOUSE—CROSS-SECTION

for the book being purchased from the owner of the patent. The brooder-house is fifty feet long and twelve feet wide, with a passage three feet wide at the rear. The muslin windows may not serve the purpose where the winters are severe, but will answer very well during spring, summer and fall.

"BREAKING" THE SITTERS

It is not necessary to use cruelty in "breaking up" sitters. If broody hens are properly treated they will begin to lay again in a short time after being removed from the nests; but if they are starved, bruised or abused it is more than likely they will not lay until they have fully recovered from their ill-treatment and acquired their accustomed tranquillity. Simply place them in a lath coop with a lath bottom, the coop slightly raised, so as to allow the air to circulate under them, and they will soon become disgusted.

USE THE BEST FOODS

The money value of poultry, or the profit in raising fowls, depends on knowing how to do it economically. Economy does not consist in cheap food, but in such as the fowls will readily assimilate and also give the best returns in desirable growth. If the food is not right no excess of quantity will make up for its deficiency in quality. Water is indispensable, and should be pure. The first months of a chick's life are the most important period in its existence to its owner. If it is neglected and stunted no subsequent treatment can make good the injury done except at a loss.

FORCING BY CRAMMING

Machines have been invented in Europe for forcing or "cramming" fowls intended for market, to make them fat in a short time. Such a practice is liable to cause disease by impairing the digestive organs. It is not the amount of food eaten, but that portion which is digested, that gives increase of carcass, and the cramming process can only be practised at a loss of food and labor. The better plan is to confine the fowls in coops and induce them to eat as much as possible by varying the food often and having it in a desirable state. Forcing or cramming the fowls can only be profitably practised where labor is very cheap.

SPACE AND CROWDING

If the space in the quarters is limited thin out the flock. If they should crowd on the roost give more roosting-room. An essential point in poultry management is to have the birds comfortable at night. They need rest and recuperation as much as do animals, and if too closely crowded the effects will be shown in fewer eggs and greater liability to disease. Lice never fail to appear in crowded houses. Chaff, cut straw or dry dirt may be used to litter the floor of the poultry-house, among which the grain may be thrown. The hunting and scratching about after the hidden morsels keep the fowls in good health, give them exercise, and consequent growth. This littering must not be put under roosts, or the grain would mix with the droppings.

THE YOUNG PULLETS

Young pullets grow rapidly in summer, but those that have been selected for laying next fall should not

Poultry-Raising

By P. H. JACOBS

be forced by feeding too heavily on grain. They will thrive much better if allowed to roam at will and pick up their food, but a mess of cut bone at night will be of assistance. The early hatched pullets should only be kept for winter laying, as the late ones do not usually begin to lay until spring. If they do not grow examine them carefully for the large lice on their heads, necks and bodies. Dusting with insect-powder once a week will be an advantage, but the most important matter is to keep their quarters free from lice. The roosts should be anointed freely with crude petroleum. It is the best plan, when raising pullets for winter laying, to cull out all the inferior ones, so as to give the others as much space as possible.

MOLTING

Summer is the season when many of the fowls will be molting (shedding their feathers), and the process is one that debilitates them. Tonics or medicines are unnecessary. A variety of food should be given instead of the regulation ration of corn or wheat. In addition to being allowed the run of a grass-plot there should be given a pound of ground meat once a day to a dozen hens. It requires about three months for a fowl to go through the stage of molting, and the sooner they finish the process, the sooner they will begin to lay. Do not sell the hens that begin molting early, as they will be the best winter layers.

CONTAGIOUS DISEASE

A contagious disease will reappear unless it is stamped out by disinfecting the premises. The germs may remain in the location in a dormant condition for years. Every inch of the ground occupied by diseased stock should be disinfected, as well as the buildings and stalls. Should fowls that have been afflicted with roup show the effects of the disease during the warmer season, the difficulty of effecting a cure is too great, and the flock should be destroyed. There is a great difference between dirt and filth. Good, clean dirt is no objection in the poultry-house—in fact, it is a boon to the keeper, and produces good results—but it is not so with filth. This is altogether a different thing. Clean dirt is a disinfectant and purifier, and so long as it is dry and friable it is advantageous to have; but filth is not only dead and effete, but it has a power of destroying all that comes within its action. The impurity from filth is disastrous to the health of the fowls, and they will soon become diseased if the house is neglected; hence the importance of strict cleanliness at all times. No hen-house ever did, or ever will, return from its inmates a profit where untidy, filthy ways are the order of things. Cleanliness is an absolute necessity if we hope to obtain good results. Only under such conditions can one keep many or few and hope for a profit. Good care is the only known guide to success with hens. If informed by persons who keep hens that they get no eggs in winter you may depend upon it that it is only from lack of good management and care, and not altogether the fault of the hens.

SHIPPING LIVE POULTRY

Live poultry should always be sent by express, and in coops high enough to allow the chicks to stand up. Give them plenty of room, as they should not be crowded. They must be allowed to move about in the coop for food and water. A piece of cloth placed over the top of the coop is an excellent thing for shade. The sides should be left open as far as possible. The lighter the coops, the better, although any kind of

is specially paid to fowls, when they are properly housed and fed, and properly attended to, after deducting the cost of keeping, care, interest, etc., from the amount for which their eggs sell, there is in nine cases out of ten a larger balance on the credit side of the ledger than is found in connection with any

single department of farm industry. One of the worst drawbacks in poultry-raising is the failure to observe the practical methods of improvement by selection. The oft-repeated suggestion or warning that new blood is necessary every year in the poultry-yard may or may not be true. Where the usual farm methods are followed—that of disposing continually of the best specimens as soon as they attain a marketable size—new blood will be annually needed. If an exchange of male birds is made with another farmer who is following the same undesirable methods nothing is accomplished. Such exchanges result in no improvement, for it is but a continuation of the inbreeding. If one has a lot of pullets of the same age, some of which will lay a dozen or less eggs, and then become broody, while there are others that continue egg-laying for weeks right along, it should be the endeavor to secure chicks from the best layers to perpetuate this good trait. The farmer can make poultry a profitable undertaking. He has the land, and the labor within his own family, and cheap food, while only a very small capital is required. Poultry-farming on a farm can be carried on at a minimum of cost. More than one poultry-farmer has entered the business from force of circumstances, being unable to obtain a living from what heretofore was called the staple products of the farm, and they are now making this interesting branch of their work a paying one, resulting from better methods of management, better breeds, and an improved system of putting their stock on the markets. The neglect of any of these essentials will lessen the profit considerably. Of course, when the farmer is a considerable distance from the market he is at a disadvantage compared with those nearer the center of distribution; but as it requires no more to convey a good chicken to market than a bad one, the difference between that received for the fat and the lean will be so much more profit, and the more profitable should be the business when conducted in a practical manner.

FOOD FOR DUCKS.—M. R. S., Adrian, Mich., requests "the proper mode of feeding ducklings and adult ducks at this season." It is better to give no food at all if they have a grass run. If anything is given, let it be a mess of ground meat at night.

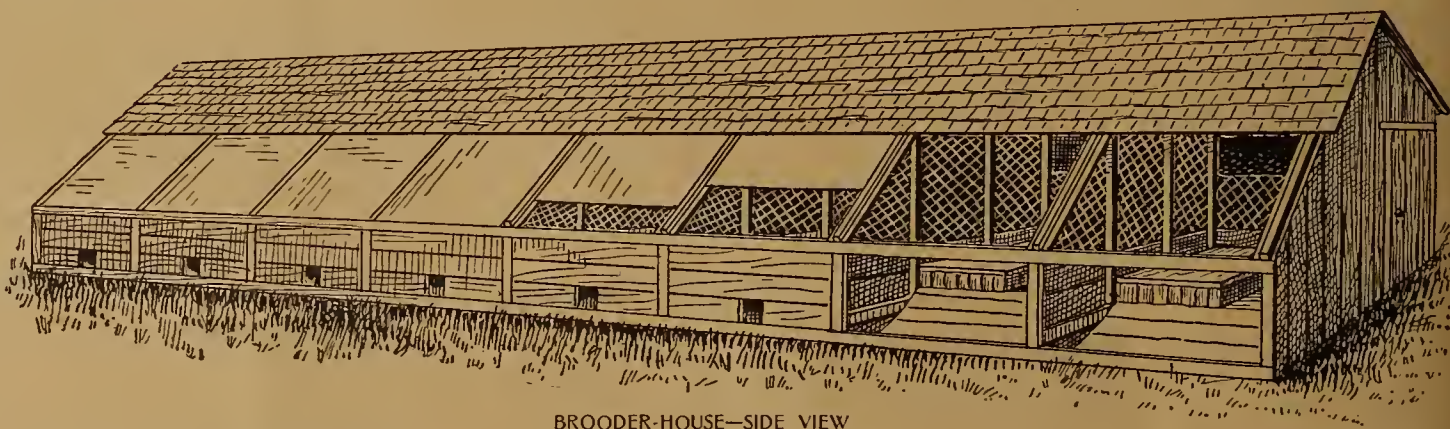
DARK EGGS.—L. G. E., Salem, N. J., asks if "there is any difference in quality between dark eggs and light eggs." Experiments show that the color of the shell does not indicate quality. Light eggs sell highest in New York City, while some cities prefer the dark eggs.

YOUNG CHICKS.—Mrs. B. E. R., Smithwick, S. D., states that "her young chicks turn their toes up, become blind, and die in a day or two." It is very difficult to give a remedy unless the mode of management of the chicks is given. It may be due to the large body lice, to damp quarters or to the food.

BROKEN LIMBS.—M. L., Michigan City, Ind., requests "a method of binding the leg of a bird when it is broken, as the use of splints may not be possible." An excellent plan is to dip a bandage in a solution of water-glass (silicate of soda), and wrap it around the broken limb. It soon becomes sufficiently firm to support the leg.

DOUBLE-YOLK EGGS.—Mrs. P. T. S., Denver, Col., asks "if double-yolk eggs indicate a diseased condition; or, rather, what is the cause of hens laying such eggs." The cause is due to the hens being in a very fat condition. Extra-large eggs, soft-shelled eggs, and sometimes very small eggs, are due to the same cause.

USELESS MALES.—E. L. G., Fairmount, W. Va.,



BROODER-HOUSE—SIDE VIEW

coops will answer. Food should always be provided in boxes in several places in the coop; also gravel, with cups to hold water. If coops are large, divide them.

UTILIZING POULTRY-YARDS

A hundred or more plum or peach trees can be grown on an acre of land. If the land is divided into yards, and the hens kept therein, the droppings will manure the soil, the hens will protect the trees, and the production of fruit thus be increased. The owner of a small tract of land can not only grow a crop of fruit, but also produce eggs and poultry for market, thus utilizing the land more profitably.

POULTRY AS A BUSINESS ON FARMS

Poultry kept on farms pay more, in proportion to capital invested, than larger stock; but when attention

asks "if hens will lay if the males are removed from the flock." In reply it may be stated that in experiments made to test the matter it was demonstrated that unless eggs are desired for hatching purposes the males are not only useless, but really undesirable, as the hens will lay as many eggs without their presence as when they are with the flock.

CANKER IN TURKEYS.—Mrs. H. P., Leonard, Mich., states "that one of her turkeys has her mouth and throat covered with yellow patches, while warty growths appear and spread on the young ones; the chickens are also affected." From the indications mentioned it is probable that the disease is of a scrofulous nature, the old turkey having canker. The application of remedies would be laborious and useless. The proper course would be to destroy the flock, as a cure could be effected, if at all, only after months of patient treatment.

The Grange

By MRS. MARY E. LEE

Why do "you" oppose Chinese laborers?

"The liberty of one generation is the tyranny of the next."

LECTURER'S TOPICS FOR AUGUST

What form of purchasable fertility is the most economical with which to restore that appropriated from the soil by growing crops?
What fruit is most profitable in this section?

REST AND RECREATION

The best remedy for that fagged-out, nervous, irritable condition of body and mind is adequate and intelligent rest. In all businesses there are times of great physical effort, when all the forces Nature can bestow are called into use. To accomplish the best results after these periods of strenuous effort added hours must be spent in rest. He who hopes to cheat Nature and crowd in just a little more work will find his work pushing him; he will find each day bringing more duties than he can perform. Drugs may stimulate for a time, but in the end Nature will exact her penalty.

Learn to rest body and mind and you will have the key to joyous, successful effort. Instead of buying Doctor Quack's nerve tonics, take the same money and indulge in a little trip. It may be for only a day, but it will give a change of view and a rest to the tired muscles. Indeed, if instead of buying so much medicine the same amount of money was as conscientiously spent in little excursions, one would be far wiser, happier and healthier. These little trips, with light food in the summer months, daintily cooked and served, ought to make any hard-working farmer a man to be envied. The same prescription applies doubly to the farmer's wife. "All work and no play" will make of any one a dull drudge.

COMFORT FOR THE PICNIC LECTURER

Most public speakers are averse to outdoor lecturing, and many of our best orators absolutely refuse all picnic talks that do not insure a building for the literary exercises. It is one of the hardest tasks to talk to a shifting and animated outdoor crowd. Despite the most serious resolutions to the contrary, those on the outskirts of the audience, who are not in accurate hearing range, gradually drift into conversation with a near-by friend. Add to these the knots of happy people on fun and frolic bent, and the result is disastrous to the speaker and would-be listener. If possible, provide a building for the speaker. He deserves it. The successful lecturer is essentially a busy man, who has made considerable sacrifice to attend the picnic. It has taken earnest solicitation on the part of managers to induce him to become one of the "availables." Unless he is thoroughly imbued with the missionary spirit, one or two picnics are his limit.

Try to have the principal speaking before dinner, or long enough thereafter for the speaker and his audience to have overcome the effects of the splendid dinners that have been prepared. Two o'clock is soon enough. Then let the exercises be prompt and spirited from start to finish. Furnish two pitchers of water—one with ice in it, the other with ordinary well or spring water. The speaker can mix to suit himself. Iced tea if not too sweet is also a welcome, refreshing and stimulating drink. Finally, if the lecturer is to take an evening train, relieve him of all embarrassment concerning reaching it on time. Make his stay with you as happy and comfortable as possible. Rest assured he will appreciate it and bear with him fragrant memories of a day happily spent among cultured and hospitable people.

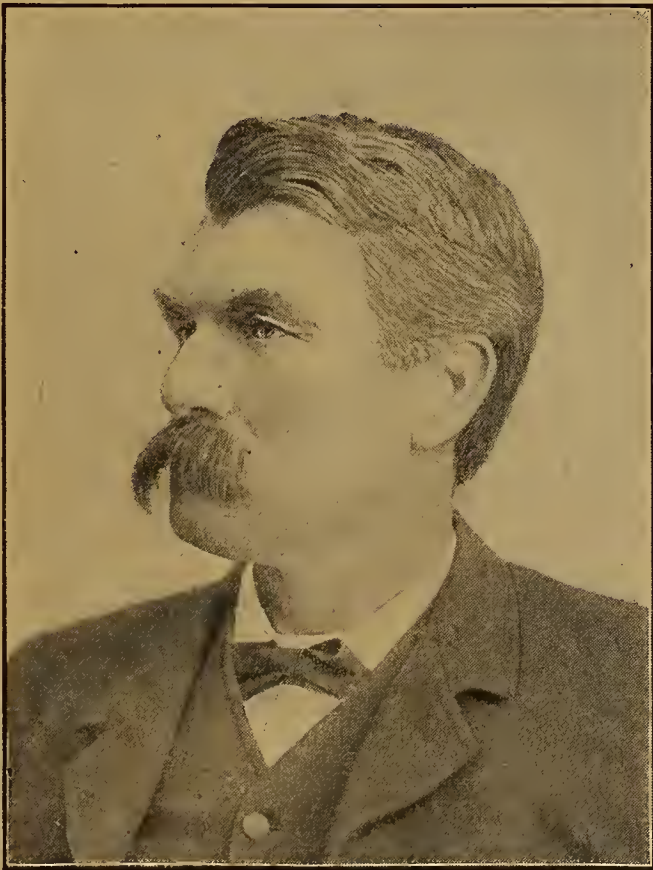
HON. J. H. BRIGHAM

Among the many able leaders in agricultural progress none are more loved or honored than Ohio's son, Hon. J. H. Brigham. From the first inception of the order of Patrons of Husbandry Colonel Brigham has been an earnest, zealous worker, untiring in his efforts in behalf of agriculture. He served for several years as Master of Ohio State Grange, and was called upon to perform the exacting duties of National Master for eight years. He has also been a member of the Executive Committee of the National Grange. He is now serving the agricultural interests as Assistant Secretary of Agriculture. In all these positions of trust he has served with distinction to himself and his constituents.

Colonel Brigham has the keen sagacity to perceive the difference between ideal conditions for ideal people and the practical needs of practical every-day men. His counsels are therefore in the line of expediency and wisdom.

The chief value of Mr. Brigham's counsel lay in his insistent belief in the immutable law of cause and effect. To the extreme radicals his caution was but another name for conservatism. But when at the opportune moment he boldly struck and rarely missed his mark, they called it expediency, foresight, wisdom, and said here is a "cultivated man, wise to know and bold to perform."

Mr. Brigham has always emphasized the educational mission of the grange. While recognizing the ties that bind farmers together, he also sees the broader, holier brotherhood in which all should be united. To him it is not so much that men are farmers or bankers, professionals or educators, but that all are striving, each in his own place, for the highest, truest life. This broad and comprehensive sympathy that enables him to grasp the whole instead of a part only has enabled him to plead well and successfully the farmers' cause. That he may be spared many years to continue his work is the prayer of every Patron.



HON. J. H. BRIGHAM



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The YORK FORCE FEED DRILL combines lightness with strength. Most complete drill made. No complex gearing to get out of order. Boxes are close to ground. Fully Guaranteed

Easily regulates quantity of seed or fertilizer, and sows with regularity.

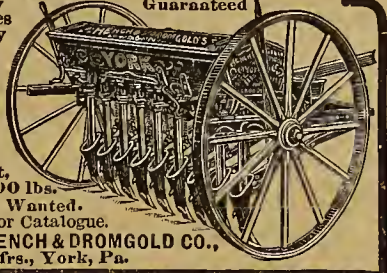
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THE CROWELL PUBLISHING CO., Springfield, Ohio

THIS IS THE MONTH the Dot Contest Ends

\$1,500.00 CASH

will be given to the winners. Try your skill at counting the dots. There's no time to lose, and your opportunity is equal to others. See page 19.

A Handsome Silver-Plated Butter-Knife Or Fine Silver-Plated Sugar-Shell

And Farm and Fireside for the Remainder of This Year for Only 40c.

And Any One Accepting This Offer is also Entitled to a Free Count in Our Wonderful Dot Contest, Described on Page 19, Offering a

GRAND PRIZE OF \$500.00 CASH

And 206 Other Cash Rewards, Aggregating \$1,500.00.

The base of this ware is solid nickel-silver metal, which is the best white metal known for the base of silver-plated ware, as it is so hard and so white that it will never change color and will wear a lifetime. The pieces are plated with the full standard amount of pure coin-silver, and are of regular size.

Will Stand Any Test To test this silver-ware use acids or a file. If not found to be plated with the full standard amount of pure coin-silver and the base solid white metal, and exactly as described in every other particular, we will refund your money and make you a present of the subscription. We are unable to adequately describe their beauty and durability. You must test them for yourself.

Initial Letter Each piece is engraved free of charge with an initial letter in Old English. Only one letter on a piece. Always state initial desired.

Pattern We have the pieces in two beautiful patterns, and we also reserve the privilege of substituting one pattern for the other if the supply in any particular initial is exhausted. We can thus fill all orders the same day they reach us.

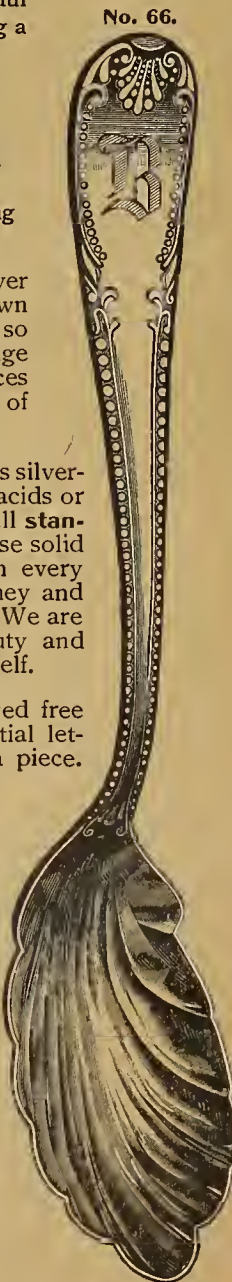
EXTRAORDINARY OFFER

We will send both pieces, the Butter-Knife and the Sugar-Shell, and Farm and Fireside the remainder of this year for only 50 cents, and also give you a Free Count in the Dot Contest.

Present subscribers accepting either of the above offers will have six months added to their subscription.

Postage paid by us in each case.

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ACTUAL SIZE

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FREE TRIAL PACKAGE sent by mail.

MOTHER GRAY'S SWEET POWDERS, the best medicine for Feverish, Sickly Children. Sold by Druggists everywhere. Trial Package FREE. Address, **ALLEN S. OLINSTEAD, Le Roy, N. Y.**

[Mention this paper.]

SEND US YOUR NAME

For our premium watch it has a **SOLID GOLD** laid case, handsome dial, dust proof, adjusted to position, patent escapement, expansion balance, quick train and highly finished and is a remarkable watch. We guarantee it with proper care to wear and give satisfaction for 20 years. The movement is **AMERICAN** make, and you can rely upon it that when you get one of these handsome watches you have the correct time in your possession. **DO YOU WANT A WATCH OF THIS CHARACTER? WE GIVE IT** as a premium to any one for selling 8 packages of Laxine for 25 cts. each. Laxine is needed in every home. Simply send your name and address and we will send you the 8 packages postpaid and our list of other premiums. When sold send us the \$2.00, and we will send you the handsome watch postpaid. We trust you and take back all you cannot sell. We give away these watches to advertise our business. No catch-words.

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PRICES REDUCED FOR 60 DAYS.

\$1.00 Vapor Bath Cabinet **\$2.25** each
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World Mfg. Co., 97 World Bldg., Cincinnati, O.

2 cents

This is a gold-plated Slide Locket and Bangie Pin Combined, engraved with beautiful French design. We will send a sample, post-paid, to any person in the United States who sends **TWO CENTS** in postage-stamps. Only one Locket Pin will be sent to each family. Address **LYNN & CO., 48 Bond Street, New York.**

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How to reduce it
 Mr. Hugo Horn, 344 E. 65th St., New York City, writes:
 "It reduced my weight 40 lbs. three years ago, and I have not gained an ounce since." Purely vegetable, and harmless as water. Any one can make it at home at little expense. No starving. No sickness. We will mail a box of it and full particulars in a plain sealed package for 5 cents for postage, etc.

Hall Chemical Co., Dept. B, St. Louis, Mo.

FEAR! ARE YOU AFRAID?

Does your courage fail before impending dangers, business distress, family worries? Are you afraid of thunder, lightning, darkness, death and other phenomena which usually arouse fear?

BROMODAL WILL STOP that and stop it forever. It drives away fear and brings courage to you. A wonderful discovery of a physician who himself for years was a victim of fear in many forms. Harmless, instantaneous, and effects a positive cure. Bromodal, \$1 a box. Mailed to your address on receipt of price.

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You can save someone's eyesight by writing Dr. Coffee for his famous free eye book. Contains 80 pages: **colored photographs** of eyes from life. An eye history. Contains eye tests; worth \$5 but it is free. Tells also how to cure cataracts, scums, sore eyes, failing sight—all eye troubles with **painless medicines**, at small expense, at home. A. J. Palmer, Melrose, Iowa, was cured of blindness in 3 months. Hope for everyone. Advice free.

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and Tumors cured by scientific methods. Long experience. No knife used. Book free. Address **Dr. C. Weber, 121 W. 9th St., Cincinnati, O.**

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—best thing known, no fraud, no scheme, no risk. Legitimate. Satisfaction guaranteed. Send silver dime and 2c. stamp. S. B. SPURLOCK, King Hill, Ark.

SPECTACLES

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BED-WETTING CURED.

Sample FREE. Dr. F. E. May, Bloomington, Ill.

FAIR WARNING

The Lot Contest ends this month. Don't fail to count the dots and try to get the First Prize of \$500.00 Cash. It is open to everybody. See Page 19.

Around the Fireside

SELLING THE FARM

BY SARA E. GRAVES

"Don't sell the old farm, John. You know how I love it—Love every inch of its meadows and hills. I live in its sunshine, its birds and its flowers. And sing my best songs to the tune of its rills.

"This house was my birthplace, and here in my childhood I played with the mates still to memory dear; And oft, as I sit in the twilight a-dreaming, Among the soft shadows again they appear.

"When father and mother from earth had passed over, And the precious old homestead no longer was mine, When dear sister Nell went away with her lover, Then you bought the farm, John, for my sake and 'lang syne.'

"Oh, sweet are its mem'ries; they fill all the niches From childhood till now, John, you well know how dear; How close they are woven 'round every heart fiber, And hold me more firmly with year upon year.

"Then, John dear, the orchard—we never can sell it—Our little Ruth sleeps by the tree she loved best; Oh, dark was the May when she strayed to the river—Among the bright blossoms we laid her—at rest."

So she pleaded. John just put his arm 'round her shoulder— They stood looking off from the little white gate— Not a tear nor a sob, but I saw his lips quiver As he kissed her in turning, and faltered, "I'll wait."

POVERTY AND WEALTH

IT is the fashion nowadays to bewail poverty as an evil, to pity the young man who is not born with a silver spoon in his mouth, but I heartily subscribe to President Garfield's doctrine that "the richest heritage a young man can be born to is poverty." It is not from the sons of the millionaire or the noble that the world receives its teachers, its martyrs, its inventors, its statesmen, its poets, or even its men of affairs. It is from the cottage of the poor that all these spring. —From Andrew Carnegie's "The Empire of Business."

PROGRESS IN FARTHER INDIA

In far-inland Pie the Laos Governor sent his carriage to me for a drive, and I rubbed my eyes when I saw an equipage which would grace Fifth Avenue, New York—rubber tires, shining wheels, luxurious upholstery, handsome harness and liveried coachman. In Chiengmai I was driven for hours over roads which were an amazement and a delight after the ridges and hollows which are euphemistically called roads in China. At Pitsanuloke, two hundred and fifty miles from Bangkok, the neat, whitewashed picket fences lining the river for more than a mile, the well-kept lawns of the public buildings, the elegance of the Siamese Club and the residences of the officials would greatly surprise a traveler who had expected to find a village of barbarians in this interior region of Siam. At Ke Kan, where I stopped for the night, there is not a single foreigner, and never has been, but we strolled for a long distance on a level, beautifully shaded, though narrow, street along the river-bank. We saw a sign bearing the word "Post-office" in English, Siamese and Chinese. We passed a telegraph-office, and on the veranda of the magistrate's residence we saw two bicycles. Sunday, December 15th, we camped near a hamlet in the heart of the mighty forest jungle, about as far from civilization, one might suppose, as it would be easy to get. But in the police-station I found a telephone connecting with the telegraph-office in Chiengmai, so that though I was on the other side of the planet from New York, twelve thousand five hundred miles away from home and six hundred miles in the interior of Farther India, I could have flashed a message to any point in Europe or America.—Arthur J. Brown, in The Great Round World.

FARMER ARISTOCRATS

Tales of sudden wealth are quite common in the famous Kansas and Oklahoma wheat belt; fine houses, modern in every appointment, are the rule; rubber-tired buggies and automobiles are nothing to attract attention. In certain communities the farmer has grown metropolitan to the extent of building an opera-house on a school-lot and securing some of the best attractions in the theatrical line. It was not until the present winter that Wichita could afford a guarantee for certain notable singers. Among those occupying front seats were well-known wheat-growers. Farmers' daughters and farmers' sons form a goodly part of the Kansas society element, while piano salesmen look to them for their quick deals. It is nothing uncommon for a farmer to come to town and buy two or three rubber-tired buggies, or even place an order for an automobile. Mr. D. W. Blain, a rich farmer of Pratt County, superintends all his harvesting in an automobile. Many others are equally plutocratic.

One of the richest farmers in the Kansas wheat belt is John T. Stewart, who came to the state five years ago. He borrowed fifty dollars from a friend, rented a quarter-section of land in Sumner County, and began work. To-day he is worth two million dollars, and his income from wheat in 1901

was sixty-four thousand dollars. He is known as the wheat-king of Kansas. There are twenty-three millionaires in Kansas, fifteen of whom are farmers living on farms and running them as an investment. Perhaps they have not all of their fortune invested in land, but a goodly portion of it is. Solomon Besley, of Wellington, placed thirty-one thousand dollars in wheat-lands last year, and realized thirty per cent on his investment, or ten times as much as he receives from money loaned in Illinois.—W. R. Draper, in Ainslee's.

RECENT SCIENTIFIC DISCOVERIES

Sir William Preece, in a recent address before the Society of Arts, enumerates the great scientific discoveries of the nineteenth century to be as follows:

The principle of evolution.
 The atomic structure of matter.
 The existence of the ether and the undulatory theory of light.

The principle of electro-magnetic induction and electrolysis.

The principle of the conservation of energy.

These he proceeds to discuss at length, showing their influence upon what we may expect to follow and supplement them. In the course of evolution we may expect selective modification to be influenced by the mainsprings which are acting most powerful—the struggle for power, the race for individual wealth, the pursuit of knowledge, the combat with disease, the advance in comfort of living; and these forces may be expected to act in the future as they have in the past.

The study of the atomic constitution of matter may lead to the discovery of many new elements, or possibly to the revelation of the one fundamental element of which all others are but varied manifestations. The existence of the ether is still inexplicable in its mechanical structure, although its reality is even more fully accepted than ever. It offers no resistance to wave-motion, and in it energy is not dissipated away into heat, as in the undulations and vibrations of matter. Still no final theory of its structure has been produced, and that problem still awaits its solution in the twentieth century.

Electro-magnetic induction is only beginning to unfold its possibilities. The communication of energy without the use of metallic or other material conductors is within sight, and in the form of space telegraphy has been partly realized. Electrical decomposition may be followed by recombination, and the artificial synthesis of organic compounds become commercially and wholly possible. With all these comes the principle of the conservation of energy uniting the action of force, motion and matter in everchanging relations, but always with an unchanging sum-total.—Engineering Magazine.

A HOME WEDDING

Reader, contrast, if you please, the simple scene and quiet comfort as portrayed below with the glare and glitter, the waste and extravagance, often ill afforded, which attend many modern weddings, and then say in your heart, "Which is to be preferred?"

Marriage is heaven's ordained order for nobility of life and domestic happiness. It is a divine contract, not to be entered into with a blare of trumpets and a vulgar display of wealth and glittering livery. In, alas! so many instances where that is the case the ceremony only signals the linking of hands together in gilded misery, to be followed in a few months or years by divorce or suicide.

How much better the modesty and simplicity characteristic of devout piety and soul-sincerity, such as is given by a writer in the Pittsburg "Dispatch," to which reference is had at the beginning of this article, and which we give below as follows:

"It is just a year ago to-day," said she who told the story. "We had been schoolmates, and she asked me to come on an early train and help her and her mother through the day. It was nine in the morning when I stepped under the thick woodbine that grew about the door of that angular little house on the edge of a New England village. She had a broad hat on, and she said, 'Come.'

"We went out into the pasture-land beyond the village, and we filled our arms with goldenrod and cardinal flowers. Then we walked back to the house, and her mother fetched jars and big bowls, and we put our flowers about the rooms.

"He came by the noon train, and she went to the gate in her print dress and her broad hat to meet him. We had a little dinner together—her mother, he, she and I.

"Then she went to dress, and came down-stairs again in half an hour in a simple little white gown. It was two o'clock when the neighbors began to arrive. She went to the door to meet them herself, and she took the minister's hat and showed the minister's wife where to put her things.

"Then by and by the minister said, 'Are you ready?' And she said, 'Yes.' And then the two stood before the minister, and she put one hand behind her and into the hand of her mother, who sat on the sofa. And when the minister began, 'Will you—' she said 'I will' before he got half through.

"After that she put on a white apron and saw that we all had cake and ice-cream. Then when it was time for her to go away she changed her dress again, and we all walked to the railway-station to see her start. When the train came up she turned to me, and said, 'Stay with mother till to-morrow. I'll get a letter to her by that time. She'll be lonely this-evening.'"

The Housewife

THE NEMESIS OF SLOTH

If we idle, life will rust,
Rust and fall to useless dust,
Dust that Time will sweep away
Like the refuse of a day.

Let the mind or muscles sleep,
Nature will her vigil keep;
Gifts of cunning, hand or brain,
By her justice will be slain.

Down the vista of the years,
Dripping with repentant tears,
Walk the pigny forms of men
Dwarfed by idle spade or pen.

Unto sloth remorse succeeds,
Struggles with the deadly weeds,
Which, like curses, choke the soul,
Choke, and stifle, and control.
—Charles Lusted.

A SOFA-PILLOW

DARNING up the huckaback has been used before, but this is made a little differently. It is called the "rain-bow pillow." The materials required are one half yard of huckaback toweling and one spool each of green, black, yellow, pink, blue, and white sansilk thread.

Fold your piece of toweling bias, and take five lengths of silk, measuring from one corner to the other, then use it double. Sew under four dots bias, then go straight, skip one dot, take the next, skip one, take the next for the loop. It takes about an inch or so for this loop.

For the back and ruffle of the pillow it takes three fourths of a yard of mercerized satin.

The pillow illustrated is the work of a little colored boy twelve years old who has only the use of his left hand. He has been a helpless invalid all his life, but has been a marvel of patient endurance under all his ills, and his face is always illumined with a bright smile for every one. Is not such a life a reproach to us who under the most fortunate circumstances complain of our lot?

TATTED CENTERPIECE

ABBREVIATIONS.—D stands for double, p for picot.

Begin with the center ring of the wheel. Make a ring of 12 p, each separated by 2 d, and close ring. Now make a ring of 2 d, 3 p, with 2 d between each, 2 d, close, and join to p of center ring. Repeat until you have made twelve small rings around the center ring. Tie securely, and cut the thread, or leave three eighths of an inch of thread and make a ring of 5 d, 1 p, 5 d, join to small ring, 5 d, 1 p, 5 d, close. With two threads make a chain of 3 d, 5 p, separated by 1 d, 3 d. Make another ring like preceding one, joining it by the first p to the side of preceding ring, and by the second p to the second small ring; repeat around. This completes the wheel, of which fifty-five are used in this centerpiece, and five diamonds, each consisting of nine wheels. These are joined to one another by 2 p of each. Put two wheels between the diamonds. Having joined all the wheels according to directions, apply the work to a linen center as shown in the illustration. If a round centerpiece is preferred omit the three outside wheels of each diamond. These wheels can be used for yokes and tidies, or if joined



to form points they are a lovely trimming for tie-ends or for bureau or sideboard scarfs, with a straight row of wheels to be used as insertion for the scarf-ends.

MRS. J. R. MACKINTOSH.

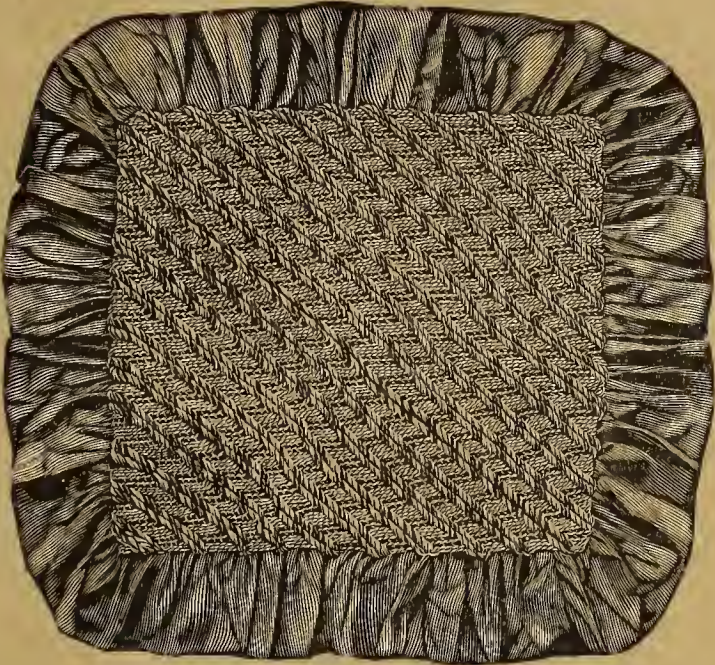
VINEGAR AND PICKLES

Potato vinegar can be made as follows: Boil potatoes in two gallons of water, then add one pound of brown sugar and one cupful of hop-yeast. In a month you will have good, strong vinegar.

If you desire your spiced pickles extremely spicy by all

means use the following receipt. It is an excellent plan to prepare quite a quantity at one time, so it will be ready for use. Two gallons of cider vinegar, two and one half pounds of brown sugar, and one and one half ounces of celery-seed, cloves, mustard, mace, pepper, turmeric and white ginger. The spices must not be put in loose, but inclosed in small muslin bags.

The superfine method of making cucumber pickles is the following: Make a brine of three pailfuls of water, four quarts of salt, a piece of alum the size of a hickory-nut and



one half ounce of saltpeter, and stir together until dissolved. If the brine is strong enough it will bear up an egg. Put in your little cucumbers, and let remain for eighteen hours. Then take the pickles out, and put them in clear, cold water, letting stand for twenty hours. Put them in with grape-leaves, following the method of first a layer of the leaves, then a layer of the cucumbers, then a layer of the leaves, and so on until all the pickles have been transferred from the brine, then cover with the water. When the pickles have been in the brine for sixteen hours put a piece of ice on top of the pickles, and let remain four hours; this will harden the cucumbers and greatly improve the flavor. When all this has been done, boil the vinegar, spiced as above described, put the pickles in stone jars, pour vinegar over them, place clean writing-paper on top, then a thick layer of cotton batting, and seal the jars. You will find firm, sound pickles when you open them, and there will be no mold whatever on the top of the pickles. They can be made to be "sweet pickles" by adding more sugar to the receipt for spiced vinegar. Even "sour pickles" require some sugar. E. B. S.

RECEIPT FOR CANNING GREEN BEANS

Pick, snap, and wash as many beans as you wish to can at a time; put them in a granite kettle, cover with water, and cook until tender. (Have a kettle of water boiling on the stove, as you will need plenty of water.) When tender put a cupful of good cider vinegar into a granite pan on the stove, and let it come to a boil. Now fill nice clean tin cans with the beans, and cover with boiling water taken from the kettle of beans. Then put into the can one tablespoonful of the boiling vinegar, and seal at once. Add more boiling water to the kettle of beans as it boils away. When you wish to use them, open the can, pour into a colander, and drain, then cover with cold water, and let stand for some time. Cook as you would in the summer. Use only young, tender beans.

To COOK BEANS.—Put a piece of pork into a pot, and let boil thirty minutes; at the same time put a handful of navy beans on to cook. When they are beginning to get tender add them to the meat and green beans, season, and let them cook until all the water is nearly boiled away. KY. GIRL.

COVERLID FOR BABY'S BASSINET

As it has become quite popular to have a linen shower for the coming baby, one is puzzled to get something that at least appears a new idea. Make a very thin pad of cotton, cover with thin pale blue India silk, knot it with white bebè ribbon on one side, and for the other side make a covering of four fine handkerchiefs joined in a square with lace beading, through which is drawn pale blue ribbon. Finish all around with wide Valenciennes lace put on rather full, and attach it to the pad. If desired, a monogram of the baby's initials can be worked in the upper left-hand corner of the upper handkerchief.

Another useful article is a lap-pad. Crochet two sides in some simple stitch, of white Germantown wool, making it eighteen by twenty-four inches in size. Fasten together on three sides, leaving one end open like a pillow-case, and into the cover thus formed slip a piece of white-rubber cloth. Finish all around with a crocheted scallop border, with a white ribbon run all around and tied in a bow at the middle of the open end. This lap-pad is to be used when the mother wishes to take the baby out for a ride, or can be used also in the baby's carriage.

An embroidered carriage-strap is another nice gift. Make it of white Java canvas or heavy white linen, embroider it with forget-me-nots, and have it properly mounted at a saddlery store. W. D. M.

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WHAT the palm-tree is to the Arab the bamboo is to the Chinese. The farmer in South China carries home his rice upon a bamboo stick, measures it in a bamboo measure, and cooks it over a fire kept alive by blowing through a bamboo tube. He dips it out of the pot with a bamboo ladle, eats it with bamboo chop-sticks, seated upon a bamboo chair at a bamboo table, while he fans himself with a bamboo fan, and after the meal sweeps the litter into a bamboo dust-pan with a bamboo broom. Meantime he has eaten, as a relish with his rice, bamboo sprouts, that look like the center of a cabbage, and taste insipid, but agreeable. He takes an after-dinner nap upon a bamboo bed, with his head resting upon a bamboo pillow.

He starts upon his journey in a bamboo sedan-chair, carrying a bamboo umbrella to protect himself from the rain, and a bamboo hat to shade himself from the sun. If overtaken by nightfall before he arrives at his destination he makes use of a bamboo lantern and cane; and if the city gates are shut he scales the wall by means of a bamboo ladder. Arriving at his stopping-place, he keeps out the thieves with bamboo window-bars, and with bamboo curtains and screens he stops curious eyes from peering into his private apartments. His host brings into the dingy bedroom at the inn a bamboo peanut-oil lamp. He writes a letter with a bamboo pen, upon paper made of bamboo. The watchman annoys him all night by beating his bamboo gong, to scare away the thieves. His rest is further disturbed by the gamblers next door, who rattle their dice in a bamboo box, and play with bamboo checks. He rises before daylight, to get an early start. He enjoys his smoke through a bamboo pipe, and washes his face in a bamboo wash-basin. He packs his bedding in bamboo baskets. He goes through the new day, as the previous one, at every turn under obligations to this the Mongolian's cheapest and most indispensable of vegetables.

I do not wish it understood that the above-mentioned articles in common use are invariably made of this material, or that every part of them is composed of this wonderful wood; but it enters largely into the manufacture of these and numerous other articles commonly used by the people of China.

The tree grows in immense quantities upon the mountain-sides, and requires very little cultivation; hence, it is the cheapest material for these numerous utensils. Its durability and workability are astonishing. It is hollow, with joints from one to two feet apart, giving the scientific maximum of strength with the minimum of weight. It splits perfectly straight, and as thin as desired. It combines flexibility with hardness, utility with beauty, strength with grace.

Its culture is simplicity itself. In the month of July a green pole is buried about two feet deep. Early the following spring it sprouts from the joints, like sugar-cane. It shoots up with wonderful rapidity from thirty to sixty feet. It has been known to grow two feet in a single day. In four or five months it is ready to cut. The following spring it will sprout again from the roots. It might well be named Goliath-grass. The Chinese neither fertilize, irrigate nor hoe it. No wonder it is cheap.

But what is all this to the American farmer? Much every way. He is the most enterprising man of his class in the world. He objects to nothing because it is new. "Will it pay?" is the first question he wants answered. Once in awhile a man is found who is "farming for his health," but he is too rare a specimen to need special attention except by his physician. Journalism does not count him.

Will bamboo-growing in America pay?

Why not? It requires no cultivation worth mentioning. It occupies little land, and that which is otherwise unproductive mountain-sides, rocky soil, the despair of the cultivator, is where it flourishes. As to climate, the southern half of the United States is in the latitude where it abounds in China. There seems to be no good reason why it should not grow as easily in Florida as in Fukien, as well in the valley of the Mississippi as in the great Yangtse basin.

"What is the use of raising what nobody in America uses?" I hear a hard-

Bamboo, the King of Grasses

By REV. WILLIAM N. BREWSTER

headed old king of the soil ask. Before the cotton-gin was invented cotton-growing did not pay. Americans did not eat much sugar when it was all in the form of maple-syrup. Cheap sugar makes its own demand. So with a number of articles now in common use. A generation ago they were luxuries, and used by a few. The discovery or invention of a cheap method of production has created the market. Witness the spread of kerosene in less than two generations. Certainly any material that is capable of such a variety of uses with the least labor would soon make for itself a mar-

commission in the Far East a year or two ago looking for new and useful plants and ideas. It is not strange that these specialists saw that there was for the bamboo a possible American future. It is said they have taken specimens home with them, and that the Department is experimenting with them, with a view to introducing the bamboo into its new environment. Any interested reader can no doubt find out what has been the success of the experiment so far by writing to the Department. A score of letters of inquiry would awaken interest in the subject if it has gone to sleep. The enterprising branch station in the Philippines could supply without limit the home demand for seed-plants and information. I would risk a prophet's reputation in the prediction that many Americans now living will see this wonderful grass gracefully waving over the mountain-sides of our Sunny South.

TREE-PLANTING FOR PROFIT

A number of years ago, as a tourist was standing on the bank of Black River, in Jefferson County, New York, and looking across the wide, sterile, treeless stretches of sand to be found there north of the river, he said to a couple of citizens of the region, "Why don't you do something to improve all that waste land?"

"Improve it," said one in reply; "how in—um—how are you going to improve sand?"

"Plant it with trees," said the tourist. At that the natives laughed cordially and heartily. They supposed the tourist was joking with them, and no amount of argument could have persuaded any citizen of the region at that time that any one could realize a profit on a plantation of trees. To the east lay the Adirondacks, with "an inexhaustible supply of timber," and at their feet ran Black River, Nature's own highway for bringing Adirondack timber to their doors.

The ideas of these two men on this matter were on a level with those of the greater part of the people of the United States at that time.

But times have changed. The spruce on private lands in the Adirondacks will be exhausted in twelve years, according to official reports, and if the state lands were then turned over to the logger the supply would last but twelve years more. People are beginning to realize everywhere that no timber-supply is inexhaustible, and instead of laughing at a proposition to plant trees for a profit they are beginning to ask seriously how it can be done.

In a book written by Prof. John Gifford, of the New York State College of Forestry, Cornell University, this serious question is answered in the simplest and most convincing manner.

One of the most practical parts of the work is that devoted to the improvement of the farm wood-lot.

It will prove a revelation to those who suppose that one must wait one hundred years before gathering his crop of planted trees. The fact is that tree-planting may be made one of the most profitable features of land-speculation, for a stand of thrifty trees, no matter of what age, adds more to the selling-price of land than the cost of making the stands.

As an example take the case of Mr. L. W. Yaggy, living four miles west of Hutchinson, Kan. He cut twenty-five hundred trees from an eighty-acre plantation at the end of the sixth year of growth, and thirteen thousand trees at the end of the seventh. Each tree

made two fence-posts, and the posts were sold at ten cents each on the ground where they grew. He obtained twenty-six hundred dollars cash for the fence-posts in the second thinning, on an eighty-acre patch of land. At the end of ten years from the planting his woodland was measured by experts from the Agricultural Department, Washington, and the stand of timber was found to be worth two hundred and sixty-seven dollars and seventeen cents an acre. After counting every expense—including all labor, the price for which the land would have rented, and the interest at six per cent on all money invested—a net profit of one hundred and ninety-seven dollars and fifty-five cents an acre remained for the ten years, or nineteen dollars and seventy-five cents a year. In addition to this profit was the money received for the trees cut in the two thinnings.—John R. Spears, in New York Times.



BAMBOO, THE KING OF GRASSES

ket in America. Already bamboo bric-à-brac manufactured in Japan brings very high prices in America. Let the raw material be grown in America. Give Yankee ingenuity a chance to make it supply the insatiable appetite of the American public for the new, the useful and the ornamental; the difficulty soon would be not with the limited demand, but with the insufficient supply.

How get a start in growing it? It is reported that the Agricultural Department at Washington had a



HOUSEHOLD FURNITURE OF BAMBOO

THE BIBLE A LITERATURE

PROFESSOR R. G. MOULTON, the eminent Bible student and literary critic, says, "Not only is the Bible truly literature, but it is 'a literature.' The significance of this may be made clear by comparison. The Koran is literature, and is said to be sublime in style by those who can appreciate Arabic sublimity. No one would call the Koran 'a literature,' for it consists only of a single literary type, the outpourings of a single author. But within the bounds of our Bible we have some sixty different books, the product of almost as many different writers, coming from many different ages, and exhibiting examples of almost all literary types.

"Some of the books are in Hebrew, some in Greek; but the Hebrew books stand apart from the rest of Hebrew literature, and all from the vast accumulation of works in all languages which these canonical books have called forth. Thus, in a survey of the whole world's civilization, the Bible stands as a literature in itself. And it differs from all other complete literatures in the fact that its completeness is a spiritual unity. There is an underlying framework of history—the history of the people of Israel as presented by themselves; the history of the New Testament church as presented by itself. Into this are fitted stories, songs, prophetic and oratorical discourses, philosophical sayings, epistles, as modes of expression for the soul that animates the body of the history."

CHRISTIAN SYMPATHY

Human hearts crave sympathy. Christian sympathy is the very essence of genuine religion. It is the finest fruit of noble character. It is the faculty of entering into human conditions, so that all men's burdens become our own. The essence of the life and teachings of Christ is condensed in the word "sympathy." He who sympathizes with another so far becomes one with him. You never know what the poor have to suffer until you have been where they are. Real sympathy, however, assumes wherever practicable a tangible form. "Whoso hath this world's goods, and seeth his brother have need, and shutteth up his bowels of compassion from him, how dwelleth the love of God in him?"

It is said in a certain story a beggar asked for alms. He who was thus approached felt for money, and finding none, said, "Brother, I have none."

"But you said 'Brother,'" answered the beggar, "and that was an alms."

There is something of more intrinsic value than money, and that is a sense of sympathy—a feeling of brotherhood. He who doles out money may be only

Sunday Reading

passing on what was given to him and what he no longer requires, but he who offers sympathy offers a part of himself. The power of Jesus was manifested in his warm sympathy for human want and suffering. Here is where Christian people fail more than at any other point.—Christian Uplook.

AN AUDIENCE WITH DALAI LAMA

"The Grand Lama, or Dalai Lama, is the man who is worshiped by Tibetans as a god. He often holds public receptions," says William Carey in his new book, "Adventures in Tibet," just published by the United Society of Christian Endeavor.

"Since his worshipers are in thousands, and it is only to those who are wealthy, or of high degree, that he can afford to address even a brief sentence or two, this is always done in a deep, hoarse voice, acquired by training, in order to convey the idea that it emanates from maturity and wisdom.

"Seated cross-legged on a platform some six feet high, he is dressed to be worshiped in the usual colors of priesthood—red and yellow—and with bare arms, and holds a rod from the end of which hangs a tassel of silk—white, red, yellow, green and blue. The pilgrim coming in advances with folded hands as if in prayer, and resting his head against the edge of the platform above him mentally and hastily repeats the petitions he would have granted. The Dalai Lama is understood to comprehend intuitively; he touches the pilgrim's head with the bunch of silk in token of his blessing, and the worshiper is hurried out of the east door, only too happy if he has passed, say half a minute, in the presence."—Epworth Herald.

IN THE TIME OF TESTING

"It is wonderful how much of our goodness is due to the lack of temptation," said a wise woman recently. "We plant our little virtues in some warm, soft soil, some atmosphere of comfort where they are sheltered from storm and stress, and they grow into hothouse luxuriance and beauty. We never doubt their vigor or genuineness until something deprives them of their shelter, and leaves them where the blasts of trial beat upon them.

"I thought myself a strong, reasonable, self-controlled woman, just and tolerant toward others, sweet-tempered and unselfish. Oh, no, I never said so, of

course, but that was the estimate of my friends, and I secretly accepted it. There was little trouble in living up to it in the dear home atmosphere of love and appreciation.

"But when a sudden change came to my life, when I was where half-veiled distrust took the place of the old, tender loyalty, where petty jealousies and clashing interests made themselves felt, and many things that had long been considered mine of right were called in question, then—ah, well! I discovered that there was a deal of bitterness, morbid weakness, anger and selfishness in my composition. I was weak in ways I had not deemed possible, and scarcely less bitter than the change in outward circumstances was the revelation of myself."—Wellspring.

FAITHFUL IN LITTLE

Little things make up life. These are tests of character. He that is faithful in least is faithful also in that which is greatest. A story is told of a youth who came home from the hay-field one summer evening tired, dusty and hungry. His father met him at the gate, and asked him to go to town, about two miles away, on an errand. His first impulse was to refuse. A better thought came into his mind, and he consented cheerfully. "Thank you," said the father; "you have always been good to me. I was going myself, but somehow I don't feel very strong." Again the father thanked his son and turned to the house. The son hurried away, and soon returned. As he neared the house he saw that something unusual had occurred. The farm-hands instead of being at the barn as usual at that time of the day were standing about the door of the house. As the son approached, one of the men turned to him with streaming eyes, and said, "Your father is dead. He fell just as he reached the door. The words he spoke to you were the last he uttered."

Years passed away, and that son related this incident in his history, and said, "I have thanked God over and over again for the last words of my father on earth, 'You have always been good to me.' It might have been otherwise. It was a little thing, the decision was made while the tempter was whispering to the heart of that son. He had to decide instantly, almost without thought. He listened to the voice of the good spirit, and turned a deaf ear to that of the tempter. By doing so he planted a flower in his own heart and in the heart of his father, which has been blooming in memory ever since."—Christian Advocate.

—Faith is the better of the free air, and of the sharp winter storm in the face.—Samuel Rutherford.

The Family Physician

By ROBERT B. HOUSE, M.D.

Persons suffering from disease caused by the continued use of alkaline waters should use boiled or distilled water, which is within reach of every household.

The odor of iodoform may be removed from the hands by washing with a weak solution of tannic acid, by rubbing freely with chloroform or by bathing them in vinegar.

When a child complains of pain in the knee for any length of time, without any evidence of local disease, invariably be on your guard. Nine times out of ten it means that the child has hip-joint disease.

A few months ago Bennet, of New York, recommended that the blind adopt massage as an occupation. He pointed out that not more than eight per cent of the blind are self-supporting. Further arguments that may be advanced in favor of this movement are that the blind are especially adept in anything involving the tactile sense; they will be in demand by patients who hesitate to be exposed to the gaze of a masseur; their fees will be small, and therefore massage will come more into general favor, and lastly, the blind will find this occupation a means of affording them healthful exercise.

NEIGHBORLY

Rusty Rufus—"De lady in de nex' house gibe me a piece ob home-made cake. Won't you gibe me somethin', too?"

Mrs. Spiteful—"Certainly! Here's a pepsin tablet."—Judge.

FLIES AS DISSEMINATORS OF DISEASE

A number of investigators have recently called attention to the important rôle played by insects in disseminating disease. Because of their great numbers and active habits flies are no doubt the most dangerous insects in this respect. After feeding on the expectoration of the tuberculous, on the feces of typhoid patients or other infective material they carry disease-germs into innumerable places, and deposit them not only by direct contact with their filthy little bodies, but by their excreta, and the dust formed by the crumbling of their dead bodies. Restaurants infested with flies are special abominations.

The danger from this source is not small, and in the summer we generally have them in earnest; with hordes of these pests it seems desirable that everything possible shall be done to limit the amount of mischief done by them. More effective measures are needed for destroying flies and preventing their multiplication. The war on mosquitoes by our sanitary department in Cuba has shown what can be done in exterminating insects, and the preparations which are already being made in several different places in our country to carry out the Cuban methods show that the people are perfectly willing to act if they are shown the right way.

Until some successful method has been devised for exterminating flies special care should be taken to prevent their access to sputum, pus or other infectious material; fruits and food-stuffs should be thoroughly cooked or washed if flies have been allowed to come into contact with them, and should be protected from flies after preparation for use.—Exchange.

The Family Lawyer

By JUDGE WM. M. ROCKEL

Legal inquiries of general interest from our regular subscribers will be answered in this department free of charge. Querists desiring an immediate answer by mail should remit one dollar, addressed "Law Department," this office.

REMOVAL OF A SCHOOL-HOUSE.—A. M. S., Wyoming, inquires: "A school-house is on my homestead. Can I compel the district to move it?" This is a matter regulated by the laws of Wyoming, to which you must refer for an answer.

THE WIFE'S RIGHT.—W. M. Mac, Ohio, inquires: "If a man and his wife make all their property while living together, and the husband dies, they having had no children, cannot the wife hold all the property?" Yes, subject to the payment of the husband's debts.

W. F. R., Tennessee, makes inquiry: "In reference to the settlement of guardians in Minnesota." If you cannot hear from the guardian you had better communicate with some responsible attorney at the place in which he resides. An attorney of your vicinity can probably direct you in this matter.

IN DEFAULT.—W. F. C., Minnesota, inquires: "Where a bond for a deed has been given, and the obligations have not been kept, could the party in default be put off?" I would say that he could. As to the length of notice which must be given, the laws of Minnesota must be consulted.

ROAD LAWS—TAXABLE PROPERTY.—J. M., Ohio, asks: "Is the new road law for Stark and Columbiana Counties constitutional?—Is an alien who owns property in Ohio compelled to pay taxes?" I do not know what particular road law is referred to. I therefore cannot answer whether it is constitutional.—If an alien has his residence in Ohio, then he must pay taxes here on the property that he holds. Real estate is always taxable in the county in which it is located.

USE OF RENTED LAND.—L. S. M., Ohio, inquires: "I paid money rent for land in 1902. If I sow wheat and rye this fall, have I the right to hold and harvest the crop in 1903?" The general rule in relation to cash money rent is that the tenant has the right to one crop off the land, or its equivalent; and therefore, if there is some part of the land of which he does not get the use, he may sow such in wheat and rye, and reap it the next summer, but he is not entitled to sow wheat and rye upon ground that he gets the use of this year.

RIGHTS OF INHERITANCE.—F. O. E., Missouri, inquires: "A widow owns a farm in Missouri, has children, and a man marries her. What are his rights? If she should die, could he take what personal property he brought on the place when he came to it? Could he have a share in what has accumulated, since he is a hard worker, has cleaned up land and improved said place?" From the laws of Missouri at my command I am unable to say what share the husband has in the real estate of the wife where there are no children born to such husband and wife. Where there is a child born, the husband is entitled to a life estate in the real estate of the wife. The husband is entitled to share equally in the personal property with the children—that is, the husband gets the same interest as each child. It may be that the personal property you brought to the farm is your individual property, and therefore if your wife dies it would be yours absolutely.

CHAPTER III.—CONTINUED

THE moment Tom had finished she was on her feet, conscious only of her great need, and began to speak with scarcely a quaver in the thin, clear voice. "I've got a heap to confess, an' I reckon I'll be killed fer some o' it! But I'd ruther die, an' be done with it, than live any longer like I am! As fer repentin', I am sorry, and want to repent fer it all! I am sorry I quarreled with Tim, an' I runned away an' left my baby. I am sorry I told on the stills!" Suddenly becoming conscious of the people, she raised her voice a little, and repeated, "I'm sorry I told on the stills, 'cause I done it fer meanness! All the good folks, though, say there hadn't ought to be no stills! I'm sorry—oh, God knows I'm sorry!" and she hung her head. "fer the way I've acted since. I've had a kind o' gnawin' feelin' here so long!" and she laid one hand over her heart. "When Miss Sylvy come, an' I seen her lookin' so sweet an' clean an' pretty, I thought it wuz fine doin's I wuz a-craivin' fer, an' I got so I hated the sight o' Tim an' our house, 'cause they wuz so common. By an' by it got to where I couldn't stand it no longer, an' me an' Tim had a fuss, an' so I takes my baby an' left him to Miss Sylvy's, 'cause I knowed she'd look after him—she allus tuck on over him powerful. Then—I went an' told on the stills—an' got money fer tellin' on 'em. I went to Atlanta, an' I got some fine things an' all—an' I done wrong—an' then I felt wus'n ever, an' I thought it wuz my baby I wuz hankerin' fer."

The crowd was listening intently, and at the mention of the child some of the women began to sob.

"So I come back here," Milly continued, "an' now that I've got my baby—oh, bless his little heart!—I feel jest as mis'able as ever. I've done all you said now, as fer as I know, 'ceptin' what you call rist'ution, an' if you will tell me how, I'll do that, too, an' maybe him you wuz talkin' 'bout will do as you said!" She was looking wistfully at Tom, with infinite pathos in her childish face. "Then if they kills me fer tellin' on the stills—why, I'll—go—to heaven!" Her voice had trailed so as to be almost inaudible.

"I bet they don't kill you, though!" came in stentorian tones from the outer edge of the crowd. "I think The Bend has got enough o' killin' women an' makin' moonshine whisky fer this one time!"

Tom went to the shrinking woman. "You have done all," he said; "repented, confessed, and though you knew it not, made full restitution, and now may God send his peace swiftly." He raised his hands, and the people bent in prayer; but before Milly could kneel Miss Stasia had taken the baby from her, and Miss Mary was at her side, whispering precious old promises and comforting the weary soul with all her simple strength, for Christ's dear sake—and Sylvia's.

CHAPTER IV.

When Sylvia was strong enough the little household went back to Sedgwick, carrying Milly with them, now happy and at rest at last and glad to find work there to support herself and Charlie. The great crowd of new converts promised wonderful things, and Tom and Doctor Armitage left for their work, feeling that a new order of affairs ought to now prevail at The Bend. The circuit preacher was encouraged to believe that he would now have more than empty benches to which to preach, so the people were left to themselves, and no one thought of that command, "Feed my lambs." No one stayed to watch over them, and to put them to work and build up their faith, so the great revival soon became more a blessed memory to the multitudes who had thronged than a living experience to be kept forever.

The day they all got back to Sedgwick Sylvia lay resting in her dainty room. The walls bore many pleasant reminders of school friends and the happy days she spent with them, and it all looked so sweet and cheery with Miss Mary sitting by the little fire. Presently Miss Stasia came in with a few autumn roses in her hand. She gave them to the girl, who took them with a smile, and caught the wrinkled old hands in hers.

"Aunt Stasia," she cried, "I feel like poor Milly. I want to confess, and ease my mind! You can never know how sorry I am for the trouble I have given you nearly all my life. When I was so sick I felt so ashamed that I was giving you and Aunt Mary such anxiety after you had so opposed my going there, and sometimes I might have cried out with the pain, only you were so good! Oh, you almost killed me with your forbearance. If you would only scold me I think I would feel better. Why don't you scold me?"

"Well, child," Miss Stasia replied, "if scoldin's ever done you any good, I have not found it out, so I shall never scold you again so long as you live."

Sylvia had detected a faint fragrance, and was looking among the roses. Lo, there was a tiny sprig of tea-olive in bloom! "Oh, Aunt Stasia, darling!" she cried, as the June morning came back to her, and she held out her wasted arms and clasped them about Miss Stasia. Miss Mary wiped her eyes in wonder, as she looked, for she had never at any previous time seen those two lion-hearted women cry.

CHAPTER V.

The winter days came on apace, and one afternoon Mrs. Perkins came to the door and asked for Sylvia. Miss Stasia eyed her with disfavor, and shaking the door-mat vigorously after Mrs. Perkins had wiped her feet on it, she followed her into the dining-room, where Sylvia sat writing. She laid down her

A Reflex Influence

By SUSIE BOUCHELLE WIGHT

pen, and spoke pleasantly to the woman, and asked after the children at The Bend. It always pleased her to remember that they had loved her, and their queer little offerings during her illness had never failed to bring a grateful smile. Sometimes they brought a trapped quail to be broiled for her, or a few creek-bream, but more often it was the autumn blossoms of the purple ageratum and golden coreopsis. There were birds' nests in the collection, a tame young squirrel and a huge, deserted old hornet's nest!

Mrs. Perkins hesitated awkwardly, so Sylvia asked her, kindly, "Is there something I can do for you?"

"Well'm, I did want to ask you sump'n'."

"Well, do, then."

The woman still hesitated, and it was with a visible effort that she began, "We-all out thar at The Bend



"She took them with a smile, and caught the wrinkled old hands in hers"

is in a pretty bad sort of a fix fer winter. You see, all our men are gone, and our means of livin' are tuck away from us—"

"Meanin' them stills?" inquired a stony voice.

The woman started, and Sylvia said, "Now, don't worry her, Aunt Stasia; let her tell me all about it. Go on, Mrs. Perkins."

"Stills or no stills," she said, "we are mighty nigh on starvation now, an' seein' as you are the cause o' it all, Miss Sylvy, our men bein' runned off an' all, I thought maybe—"

"Cause? Cause?" snapped Miss Stasia. "Sylvia didn't tell on your old stills!"

"Now, Aunt Stasia, do!" pleaded Sylvia.

"No'm," said the woman, calmly, "Miss Sylvy didn't 'port on 'em, but she got Milly Burns into such a tantrum that she did, an' it is all the same thing." Mrs. Perkins removed the brush from her mouth, and after eyeing the immaculate hearth for a moment, she went deliberately to a window, raised it, and leaning out, ejected a thick brown stream over the lilac-bush beneath. She was warming up to her subject, so she disregarded Miss Stasia's disgusted face, and continued, "An' you know, too, Miss Sylvy, you bein' down in bed thar so long was the cause o' Doctor Armity an' Mr. Channin' havin' that big meetin' Praise the Lawd, I was led to The Light in that same meetin'," she broke out, irrelevantly, clapping her hands loudly together. She gazed a moment at the ceiling, then giving her brush a dip in the box, she took a few fresh rubs, and resumed, "The folks did git sense enough arter awhile to fetch their rations with 'em, arter the preachers up an' tol' 'em to, but it warn't till they had done et up every blessed thing we-all had."

"Dear me," said Sylvia, distressfully.

"Yes'm, it's the Lawd's truth, an' seein' you are the cause o' every bit an' grain o' it, I thought maybe you would help us out—"

"Yes, Mrs. Perkins, I will help you if I can," said Sylvia. "I am going away in a week or two for a long visit to a friend in Florida, but I will go out to The Bend first and see what can be done. Have none of the men come back yet?"

Mrs. Perkins' brown face reddened a little, and she made another onslaught on the lilac-bush before she answered, solemnly, "I hain't seen hair nor hide of 'em since they left, an' I tell you I'm in a bad fix with eight head o' chillun to feed, an' nothin' to do it on!"

"Well, you shall have help," said Sylvia, kindly, and she made the woman sit down and drink a cup of coffee and eat a comfortable lunch before she went away.

"Now, Aunt Stasia, aren't you going to scold me?" she asked, as Mrs. Perkins disappeared toward the ridge.

"Scold? No! What's the use in scoldin' a born dunce?" she said.

"No use, I guess," said Sylvia, softly, "but, dear, maybe a born dunce can claim the 'Inasmuch!'"

True to her promise, she went to The Bend and inquired into the needs of each family there. She came away, sad and distressed, for although nearly every person there had professed a change of heart, the houses were as cheerless and unclean as ever, and their inmates as unkempt. She had imagined it would make such a change in their every-day lives, but it seemed to them a thing apart—merely an emotion.

The children greeted her gladly, and swarmed about her with a chorus of "Don't you 'member, Miss Sylvy's," and "Don't you ric'lect, Miss Sylvy's." Miss Sylvia "remembered" and "ric'lected" in every instance, and she patted this tousled head and that dirty cheek until the whole crowd of young ones were ready to follow her to the ends of the earth, as though she were a new edition of the Pied Piper of Hamelin.

"They at least are like any other children, and could be educated and elevated," she said to herself that night, as she sat thinking over the scenes of the day. She was gazing idly at the coals, and as if by magic the wonderful vision she had once had of a prosperous and happy Smoky Bend came back to her. She started. "I wonder I had not thought of that way before," she said. "I know it is the only right one to do work there. The old people are so set in their ways that I could not do much for them, but those children can, and shall, be saved!"

Before she went away she left in Miss Stasia's hands a sum of money to be paid monthly to each of the women, and arranged to get work with neighboring farmers for as many as possible of the larger boys, but said nothing of any further plans for settlement-work at The Bend.

At the end of her first month at her friend's home she received a letter from Miss Stasia, short and to the point. With some corrections it stood thus:

"MY DEAR SYLVIA—According to your wish, I went out to The Bend yesterday to see how your friends were making out on your allowance. I found new clocks in some of the houses, and a good many big-flowered satin dresses, and wool hats with fuzzy pink and blue feathers on them. A peddler had been along, and there was plenty of brass jewelry around, but when I inquired about something to eat they all put up a mighty poor mouth. So after this, if they see any more of your money, it will be in the shape of corn-meal and fat bacon. The children look as nasty as ever. So no more from your aunt,

"ANASTASIA BATES.

"P. S. I forgot to say that it being somewhat of a rawish day there was a good-for-nothing man sitting in every chimney-corner, except them where the men were taken to the penitentiary."

Sylvia turned to the dark young man who was sitting by her side. "Listen, Hugh," she said. She read aloud Miss Stasia's epistle, and they both laughed over its characteristic expressions. "Don't they need help?" she asked.

"Yes," he replied; "and we are going to help them this time."

Sylvia leaned back contentedly, and they began for the hundredth time to talk over and over the plans they had made for a great school at The Bend.

To Tom Channing was left the task of explaining the plan to the aunties. Everything, he said, had seemed to work together to bring it about. A corporation of men had been attracted by the rich, alluvial swamps about The Bend, and had bought up thousands of acres of it, working so quietly that there was no inflation of prices. Farming and milling operations were to be set in motion at once, giving employment to hundreds of men, and Sylvia, still greatly interested in The Bend, proposed to establish there a large school. She had donated her land to the conference of her church; the building also had been donated by "a friend," and suitable arrangements had been made for carrying the work forward at once, details of which they would hear later. He told it all in a very businesslike manner, and answered patiently all of their questions. They were so absorbed in the story that they scarcely observed him, but by and by Miss Mary looked at him sharply.

"Thomas," she said, "you look kinder pale! You ain't gettin' bilious over at that boarding-house, are you? Because if you are, you must pack up right away an' come here with me an' Stasia."

"I believe I'll play sick just to get to come," he said. "But I can't quite do that, Aunt Mary, for I am all right—all right."

"Stasia," said Miss Mary, after they had talked the matter over time and again, without mentioning the two names most prominent in their thoughts, "don't you reckon Sylvia and Doctor Armitage are them details Thomas mentioned? Don't you reckon they are a-goin' to git married, an' carry on that settlement-work themselves?"

"Mary Martha," she answered, "I'm not a prophet, nor the son o' a prophet, an' I ain't goin' to waste no time tryin' to foretell what ain't foretellable. Don't you know if you say Sylvia Farrar is goin' to do a certain thing, she'll up an' do exactly the other way? So hush, an' come on, let's go to bed."

THE END

IT WAS a warm, hazy morning in August. During the sultry night the thermometer had been making lap after lap, until at daybreak it had registered its century-run.

In the gray mist of dawn the harsh, nocturnal song of the katydids became fainter and fainter, while the lusty hurdy-gurdies of the grasshoppers and locusts played low and subdued music.

The sleepy town seemed slow in awakening. From a few tall chimneys the smoke curled heavenward, but it soon lost its identity in the dark and ominous sky, through which, at the horizon, came a warning glow of crimson.

Even at this early hour many of the flowers in the garden around a low, unpretentious rambling cottage, almost hidden by two large elm-trees, were drooping.

This garden was one of the show-places of Bickford. It appeared as if every available foot of ground had been cut by rule into triangle, square, diamond and quadrangle shaped flower-beds, each bed edged with a ruff of box and separated by a narrow gravel path. Unlike its neighbors, there were no old-fashioned flowers. The pinks across the way were carnations in the Brayton garden, while the daisies were discarded for brown-eyed marguerites. The magnificent asters in their regal coloring and size with the mammoth ragged yellow and white chrysanthemums were a great contrast to their uncultivated cousins in the adjoining garden. If the mignonette and heliotrope were less fragrant, they were long-stemmed and feathery. The begonias were like June roses, and the roses in size resembled—dare I?—cabbages. Was it any wonder that the simple people, accustomed to sun-flowers and hollyhocks, with beds of peonies, bachelor's-buttons and phlox, brought their friends to see this floral display?

The only sound about the place was the whistling of the robins for rain—that is, until a little girl of not more than three summers, with crumpled curls, sitting on the trellised porch, began cooing and crooning to a doll upon her lap. Although the loss of a leg and an arm had somewhat divested the sawdust baby of its shapeliness, the maternal love was apparently, as in real life, centered upon this her most unfortunate but best-beloved doll.

The interludes were busy moments; as the song ceased a chubby finger was placed into a jar of crimson grease-paint, used for tinting the nails, and liberal portions applied in spots to the china face so near her own. This continued until the material gave out; then, as if some weighty thought had been considered and decided, the child suddenly rose to her feet with her infant clasped tightly in her arms. After peering cautiously around the house, she ran down the steps, through the garden gate to the street, and in a few seconds was out of sight.

A tall, soldiery-looking man walked along the streets of his native town without noticing the many improvements or changes for the better which had taken place since he left the familiar sights that cold night in November.

Those interminable years as surgeon in the Marine Service at Cape Nome had not made him forget, nor stilled, the pain—only stifled it. The well-known thoroughfares seemed filled with strange faces—or was he so changed? One or two friends greeted him cordially, and spoke in the old neighborly tone, but he read in their looks, although they did not say it, "My boy, how old and gray you have grown!"

With his mind full of conflicting thoughts he turned a corner sharply, colliding with a child, flushed and warm, who was running at full speed in the opposite direction. Catching her in his arms to prevent her falling, he said, "Well, my little fairy, why in such a hurry?"

Hugging to her breast a battered doll, whose face was carmine—that is, in spots, where it had not come in contact with the white dress of its mistress—the little girl answered, with a little catch of the breath, "Hush; Arabella Jane has dot measles, an' I's takin' her to the doctors."

"How dreadful! But I'm a doctor," said the stranger, placing her on the walk and taking her chubby hand in his.

"I's runn'd away. Nobody don't know. Arabella Jane's dot it."

"We'll keep the secret," said the gentleman, smiling, as he noticed Arabella's comical make-up for the disease.

Hardly conscious of what he did, he carried the child across the street to an open square, where a splashing fountain, a clump of trees and a few flower-beds raised it to the dignity of a park. He sat down beside her, upon one of the benches, and as he kissed the sweet baby face the stern lips twitched and the man felt the frozen muscle he had once called a heart pulsating with new life.

"What's your name, little one?" he asked, with his voice full of longing.

"Harriet Ruth," answered the child, humming a little lullaby as she laid Arabella Jane on the grass.

The young man started perceptibly as he heard those two familiar names.

"Yes," continued the child, confidentially, looking into his face; "but you musn't call me Harriet, 'cause den my Aunt Ruth is cross; an' you musn't call me Ruth, 'cause den my Aunt Harriet is cross, so I's always Harriet Ruth."

The young physician took the child in his arms, and looked long and seriously at the delicate features.

"Merely a coincidence. She never could have been so cruel," he said, doubtfully, half aloud.

A Unit of Love

By JESSIE WADE MANNING

"I dess you're sorry 'cause you tan't cure measles," said Harriet Ruth, impatiently.

"Oh, yes, I can," he answered, recovering himself, and kissing the little pouting mouth, while from his own dark gray eyes all doubt was gone.

Rising and taking Arabella Jane and her mistress over to the fountain, he held Arabella's head under the spray until all signs of contagion were removed. Harriet Ruth stared horrified.

Fearing similar treatment, she said, flatteringly, "Grown-up folks know lots o' sings, don't they?"

Before an answer could be given the child, wiping the doll's face with her dress, continued, with a sigh, "'Cause my mother does. Dess she has to, 'cause I ain't dot no father like other little girls."

"Where is he?" asked the gentleman, his heart thumping as he waited Harriet Ruth's reply.

"'Way, 'way off, mother ses. She desses he'll never come back. An' den she tries an' tries, an' ses how dood he was, an' big an' grand."

"What is mother's name?" came in a voice choked with emotion.

"Why, jest mother," she returned, climbing up into his lap and pressing her soft pink cheek against his ruddy one, as he sank overcome on a near-by bench.

"But what do other people call her?" he managed to articulate.

"Let me sink dess a minit; oh, somefin', I fordoot," the child vouchsafed, slipping down out of his arms.

"I's doin' now to mother. Maybe you'll come, too, when you see w'at I dot in my pottet for her," holding up a little dead robin triumphantly.

Then the small face changed like a flash, the under lip dropped, as she saw an old gray-haired man hobbling toward them. His straw hat was torn, and the overalls he wore were covered with loam. The perspiration stood in beads on his wrinkled forehead. As he drew near and recognized Harriet Ruth's new friend he removed his old head-gear, and exclaimed, "For the Lord's sake! if it ain't the Doctor!"

"Yes, Hiram," replied the gentleman, reaching for the child, who was hiding behind him, while he looked at his old gardener reproachfully.

Laying a hand heavily on the old man's shoulder, he said, hoarsely, "Hiram, this is my child!"

"That's what she is, sir," he answered, somewhat defiantly, looking down at his cowhide boots.

"Why was I not told?" roughly asked the Doctor, stroking the matted brown curls as the little head fell back on his arm and the lids closed over the soft, dark eyes.

Unheeding the question, Hiram looked at the sleeping child, and said, jealously, "She's the apple of this old man's eye, as her mother was 'fore her."

Seating himself by the side of the younger man, he hesitated before speaking again, then said, coldly, "I'd better go back a bit an' tak' a load from the old man's mind. A shiftin' o' a cargo often helps into port."

"It was early in the evenin' o' the night you left home so sudden like that I unlocks the garden gate leadin' to the lane an' lets a man in, all muffed up. About the same time my mistress comes down from the house an' talks in a low voice to the stranger."

"While I was rakin' up the dead leaves near the greenhouse I couldn't help hearin' the feller say, 'You promise to keep it a secret 'till I reach Japan?'"

"As she promised be bent his head an' kissed her, then I sees his face."

"Well?" said his listener, impatiently, as each word pierced an old wound like a poisoned arrow.

"An'," drawled the gardener, not noticing the interruption, turning his snapping black eyes full upon the young physician's face, "one's lik'ly to mak' a mistak', 'specially in the light o' the moon. As he goes out I says softly, to be sure, 'Charlie Musgrove, ez there anything I kin do fer you?'"

"Charlie Musgrove!" exclaimed the Doctor, with well-feigned astonishment, not wishing his servant to know he, too, had been an eye-witness from his office window. "None of your cock-and-bull stories with me, Hiram!"

"Heav'n's my witness," he answered, solemnly.

"Did you tell your mistress that you recognized her cousin?" The words came slowly, with lowering brow and a curl of the lip.

"Cous'n," repeated the old man, wonderingly. "Who said anything 'bout her cous'n?" Then, as a light illumined his denseness, he drew close to the physician, and said, "It wasn't that Charlie; 'twas t'other one, that dare-devil broth'r o' hern, an'—"

"May God forgive me!" broke in the Doctor, his face white and drawn.

The child in his arms opened her eyes for a moment and then closed them again, but that moment decided the high-spirited, impulsive man.

"Take me to the child's mother, Hiram," he ordered, peremptorily, rising.

"It tain't no use; her heart's chockful o' bitterness, an' since she's bin workin' fer that old skinflint o' a florist, Dave Thermley, she's lookin' mighty po'rly."

"Working!" exclaimed the young man, with a startled look, as he walked beside the gardener in the direction of his old home, carrying his child.

"Indeed, she wer'n't the kind to tetch the money you sent her, Doctor Brayton, nor tak' anything from her own folks," said Hiram, indignantly. "Notwith-

standin'," he continued, "her sisters—Miss Harriet an' Miss Ruth—bin mighty generous with the baby; never a present that Miss Harriet gives but one comes tumblin' after from Miss Ruth, an'—"

"You've not answered my question, Hiram," said the physician, wearily.

"I'm no lightenin'-bug, Doctor," he answered, "so I ain't able to tell what's happened these years in a minute. You see, old Thermley, allers on the outlook to fill that new-fangled cash-box of hisn, got an inklin' our ginger-jar was low, so he offers her a job a-sellin' his frapped flowers, knowin' as how her name was a drawin'-card; but it tak's lots o' staminy to tak' the glad hand o' friends o' yourn when your sellin' instead o' buyin'. The time she worri'd 'bout my wages I says, 'I'll tak' the gard'n as an investment.' It's bin no steel trust, Doctor, but the seeds an' bulbs has kept that unsalted mouth o' that darn'd tax-collector but-ton'd."

The old fellow, who had hardly taken a breath during the recital as he hobbled along, looked into the face of the young man as they reached the gate. Seeing the sorrow depicted there, he seemed glad and anxious to add to the pain. This moment he had anticipated many a night as he sat in the kitchen of the house whittling "Charlies," as he called them, for the cook-stove.

As they walked up the gravel walk he stood still, and said, "The day after Harriet Ruth was born she calls me to her bedside lookin' like a pearly snowdrop betwixt heav'n an' earth, an' says, 'Hiram, I kin stand everything but losin' the baby.' It didn't tak' no house to fall on me to know what she was drivin' at. While I mus' allow it seem'd unnatural like, I was mighty glad she'd that fear, 'cause I'd used 'half a bottle o' bluein' an' covered the hull back o' a price-list o' a Boston florist with writin' like tracks o' a hen in soft mud tryin' to tell you."

A faint smile played about the mouth of the physician. As he was about to speak, the old man tiptoed onto the porch and beckoned him to take a rocking-chair that was screened by the honeysuckles from the broiling sun.

Margaret Brayton was in deep thought as she hurried through the stifling streets to her home. An hour for luncheon gave her time to see her child and direct her simple household. In the eyes of the fragile-looking young woman was the shadow of a great sorrow. All morning she had felt restless and ill at ease. The heavy atmosphere, the unusual stillness, gave birth to all kinds of forebodings. No amount of will-force could keep from her mind the tragedy of her life. As the bits of colored glass in a kaleidoscope fall into place to form the whole, so the rapid events of that evening came with startling rapidity—her brother's crime and escape; her promise to keep the secret of his flight; his strong resemblance to a favorite cousin bearing the same name; her husband's accusation and injustice; the circumstantial evidence, the quarrel and separation—and yet was she entirely blameless? Had her revenge been as sweet as she anticipated when she kept the childish prattle from his hungry ears, the soft velvet of baby arms from about his neck, and the warm pressure of cherub lips and dimpled cheeks from the bearded face?

Yes, she had lived without his love; but had not the child filled the aching void? If Margaret Brayton would acknowledge it, she idolized the child because she knew whose passions gave her life, and whose blood ran in her veins.

Reaching the gate, with her hands upon the latch she paused as she heard Harriet Ruth's shrill childish voice saying, gleefully, "An' you is my trooly father?"

"Yes, sweetheart," said a voice that sent the blood to the listener's pale face, and caused her to place her hand quickly upon her heart.

"I des mother won't try any more now, 'cause she's dot you. Does you sink a noful lot of her?"

"More than my life," came the voice, in husky tones.

A few bitter teardrops fell from Margaret Brayton's eyes, while an overwhelming wave of emotion shook the slender frame. A step on the gravel betrayed her. Before she could compose herself her husband bent over her, and said, in tremulous tones, "Margaret, Madge, darling," while at the same time she felt the child tugging at her skirts. Margaret took a step backward, but not before she noticed that he, too, had suffered. Her long-cherished resentment was a barrier not easily overcome. Through his jealousy her anguish had been deep and keen. While pride and love were racing for a phantom goal, Harriet Ruth, with a feeling that something was amiss, said, reproachfully, to her mother, "He is dood an' big an' grand."

Margaret picked the child up and kissed her passionately. Turning to her husband with all the old love shining in her tear-stained eyes, she said, "Here, take her; she is mine and—yours."

Hiram, who witnessed the little scene from where he was trimming the hedge, dropped his pruning-shears, and clasped his hands together, saying, reverently, "Thank'ee, Lord, fer answerin' the prayers o' an old sinner."

'Tis weary watching wave by wave,
And yet the tide heaves onward;
We climb, like corals, grave by grave,
That pave a pathway upward;
We are driven back for our next fray
A newer strength to borrow,
And where the vanguard camps to-day
The rear shall rest to-morrow!

—Gerald Massey.

FASHION NOTES FOR MIDSUMMER

FANCY waists continue to exhibit the closing at the back.

Shirring is seen on many of the pretty new frocks for juveniles.

The taffeta coat is acknowledged to be one of the smartest wraps of the season.

The slot-seam is a distinguishing characteristic of both the newest skirts and jackets.

The one special note of color in dress this season is green; the shade known as emerald-green is perhaps in highest favor.

A white gown of some soft sheer fabric is practically indispensable for wear at garden-parties, afternoon teas, lawn-fêtes, outdoor receptions, etc.

That the boléro will continue in favor as an adjunct

How to Dress

OUR FASHIONS

The dominant note of the summer style is still fluff, fuss and furbelows. Ruffles, ribbon and lace are profuse upon all toilets. Sheer fabrics have supplanted the light-weight cloths, and even silks are abandoned for the present. The work upon many of the thin dresses can be just

as well accomplished by the home dressmaker, and in her spare times she should fashion a suit for the coming cooler days. It is always well to have such a suit.

For the outdoor sports nothing is so comfortable as a short skirt that just escapes the ground all around, which can be made of mohair, pongee or any dark silk unlined; a comfortable waist with elbow-sleeves that have the cuffs turned up on the arms, and the

CHILD'S SUIT

This pattern develops well in any of the soft summer silks or other soft fabrics. The skirt has an inset of insertion as its only decoration. The soft, full waist is attached to a yoke of all-over embroidery or coarse lace. The short sleeves are finished like the waist, with embroidered beading, through which ribbon can be drawn. For a child two or three years old this is



CHILD'S SUIT



PING-PONG SUIT



CHILD'S OUTING-SUIT

to the fashionable bodice is evinced by the variety of modes that one sees exhibited.

Dainty roses of chiffon and ribbon are much used for dress and corsage ornamentation. These roses may be easily made by a clever needlewoman.

For general summer wear there is no more serviceable as well as fashionable garment than the shirt-waist dress fashioned from foulard, taffeta, pongee, linen, piqué or one of the more numerous lawns or gingham.

Irish lace is at present the leader in the fashionable

a very pretty dress in white China silk. If the insertion is not cared for, the skirt can be hemstitched, allowing a hem four inches wide.

PROMENADE-COSTUME

The ruffled skirt and Eton jacket are still in favor as a general outing-dress. When made of black silk, and the flounces trimmed with black velvet, it is a very desirable dress. The jacket is worn over any kind of a white blouse. The large collar is made of white peau-de-soie silk, edged with appliqué lace trimming

popular "ping-pong" collar, that gives a coolness to the neck, and which no other neck-finish does. For wear with other waists this collar is made of a soft, prettily finished handkerchief edged with Valenciennes lace. The braided shoe-string belt in either black or white or a combination of the two colors, also a necktie of the same, are very pretty accessories for this suit. Use the ordinary flat shoe-strings, and braid them in basket-weave, as one would her hair, using twelve strands for the necktie and eighteen or twenty for the belt. Finish the ends with a tassel by raveling the



PROMENADE-COSTUME



in silk, and it is all dotted with black French knots. This is a suitable model also for many other materials.

RECEPTION-GOWN

Flowered grenadine or plain black viole lends itself kindly to this costume, which is trimmed with black velvet straps held in place with crystal buttons. It can be worn over a black silk underskirt or one of a color.

CHILD'S OUTING-SUIT

This suit appears well in several materials. In white piqué it is suitable to be worn on warm days. In gray Henrietta or challis it can be made very attractive by using crimson bébé velvet ribbon as a trimming, or in white cloth trimmed with black velvet.

Any of these patterns furnished from this office for ten cents. Waist and skirt are separate patterns.

PROMENADE-COSTUME.—Waist, No. 4071. Bust measures, 32, 34, 36, 38 and 40 inches. Skirt, No. 4182. Waist measures, 22, 24, 26, 28, 30, 32 and 34 inches.

CHILD'S SUIT, No. 4179. Sizes, 8, 10, 12 and 14 years.

RECEPTION-GOWN.—Waist, No. 4180. Bust measures, 32, 34, 36, 38 and 40 inches. Skirt, No. 4124. Waist measures, 24, 26, 28, 30, 32 and 34 inches.

PING-PONG SUIT.—Waist, No. 4191. Bust measures, 32, 34, 36, 38 and 40 inches. Skirt, No. 4190. Waist measures, 22, 24, 26, 28, 30, 32 and 34 inches.

CHILD'S OUTING-SUIT, No. 4103. Sizes, 8, 10, 12 and 14 years.



RECEPTION-GOWN

laces; separate waists are embellished with it and entire gowns evolved from it. For linen and other wash-gowns nothing is handsomer than the yoke, sleeve and collar decoration of this lace.

Neckwear is demanding an unusual amount of attention; a recent caprice is to have the ruff match the gown in color, and the introduction of rosebuds gives a pretty touch. Chiffon, Liberty silk, plain and embroidered nets, and soft fabrics generally are much in demand.—The Delineator.

ends and tying them in a knot. The belt costs fifty cents and the tie thirty-five cents in the stores, but can be made at home for much less. This "ping-pong" suit bids fair to become quite a favorite.

LACE COLLAR

This collar is made of the fine Renaissance braid combined with lace-stitches. It is for a child, and is to be worn over a black silk coat or as a neck-finish to a dress, which can be of any of the louisine silks.

NO NAME FOR IT

RICHMOND—"How about that new health food you invented? Is it on the market yet?"
Bronxborough—"No; I've given it up. I find that all the good names have been used."—Sun.

UNNECESSARY EFFORTS

Keegan—"Old man Rafferty near had a fit whin he heard his darter an' young Rooney had bin married fer six months."
Regan—"C'u'd yez blame him? There he'd bin treatin' th' young blackguard loike a gentleman fer six mont's, jist thryin' to git him into th' family."—Judge.

A TERRIBLE THREAT

When my sister was still a very little, rosy-cheeked girl she was naughty one day, and mother said, "I think I shall have to put Annie in the cellar if she is not good."
"Then I'll eat the sauer-kraut," said the little fat offender.
When you realize that it was the winter's supply—half a barrel—you will not wonder that mother put off the punishment.—Little Chronicle.

PAVING THE WAY

She knew enough. A popular young German gentleman has been calling at a certain house for six months. He is charming, say those who are personally acquainted with him, and there is a big family of single daughters at the house where he calls. One day recently he paid a visit to the special girl he favored, whether with an eye to matrimony or not—anyhow, he was very nice to her, and the girl came to the conclusion that it would be her duty to take him into camp.
"Do you speak German, Miss Lucy?" he asked, as they sat in the parlor with the gas turned down and a pink lamp making everything couleur de rose.
"Me speak German? No!" she exclaimed. "I never thought of learning the language. It's too hard for me."
"Oh, you ought to speak it," he insisted; "it is the grandest language out, the most beautiful and elegant. I am astonished you never cared to master it."
"Oh," said the charmer, as an idea dawned on her, "I know enough to understand anything important; I can say one word in German splendidly."
"And what is that?" he asked, eagerly.
"Tee hee," giggled the dear innocent girl; "I can say—yes—in German beautifully."
Has she said it? If she has not it's no fault of hers, dear girl; no, indeed!—Louisville Times.

BOYS' DOGS

A BOY loves a dog. That goes without saying. And if the boy happens to be bright, wide-awake, energetic and in the country he and his dog are very likely to be inseparable. It does not matter whether the dog be of patrician blood or merely a mongrel, the boy loves it, and the two will go off on long tramps through the woods and across the fields, chasing squirrels and rabbits and investigating woodchuck-holes and promising brush-heaps.
And yet if the dog be quick of eye and mind, instant to grasp and eager to carry out his master's almost unspoken wishes—as is characteristic of the best breeds—the companionship will be that much more sympathetic and delightful and "chummy." They go in swimming together, lie upon the bank for hours, perhaps, gazing at the water, the trees and the sky, exchanging comments and experiences—the boy with his tongue, and the dog with his eyes and tail and occasional inquiring or confirmatory barks. It would not do to tell the boy that his dog does not understand every word he says. He would treat such an insinuation with the scorn it deserves, for he knows that the dog knows.
As a rule the boy who is in quest of a dog does not know what he wants, except that it is to be an animal with four legs and wagging tail and snapping eyes, who will be ever ready to race or hunt or play with him whenever he is in the mood. But in this, as in most cases, it is best to get the best. In seeking a dog let the boy choose one that will be more than a mere follower, eager and willing though the dog may be. What he wants is a companion and friend, loving, keen of comprehension, alert, ready to interpose its own life in case of emergency, and able to do a little reasoning on its own account.
The Newfoundlands are showy, obedient, tractable and the best water-dogs. They can swim with a boy's or man's arm around the neck, thus giving support. They must have freedom and be taught manners, but should never be cowed.
The character of the true Newfoundland dog is one that will bear the strictest investigation, and lucky indeed is the boy who can get a puppy of the right type, and who can afford to keep him well and train him aright. The training is not a training for tricks, but a training that will bring out all the animal's best qualities and turn them into use.
The dog never needs punishment. Indeed, he never deserves it, and being extraordinarily wise, he must have a very poor opinion indeed of any boy that would raise either stick or whip to beat him. You may beat a puppy if you want to spoil and cow him for life, not otherwise, and it is most cowardly to do so.

Wit and Humor

DRAMATIZED ADVERTISEMENTS

(It is announced that a well-known series of advertisements is to be dramatized in the form of a comic opera.)
They're dramatizing ads to-day—
They're dramatizing ads.
They'll dramatize most anything
To garner in the scads.
We'll see "Self-Raising Buckwheat Flour,"
And "Smellem's Rare Perfume,"
As well as "Blank's Reclining-Chairs"—
They'll play to standing-room.

They'll give us "Wotter's Cure for Drink,"
But ere the villain's death
The men will leave between the acts,
To come with cloven breath
And sit beside the lady fair
And tell her to be sure
To see the ballet-dancers in
"The Peerless Bunion-Cure."

"Two-Dollar Shoes" will bring you to
Your feet—they will not fail;
And do not miss the funny show,
Of "Drawing Taught by Mail."
Also attend the "Rooms for Rent,"
And "Bargain-Sale of Silk."
The very cream of all the shows
Is "Cow-boy's Condensed Milk."

In juveniles, "Brown's Baby-Food"
Will have some cunning scenes,
And 'twill be worth your while to see
"Muldoon's Canned Pork and Beans."
They're dramatizing ads to-day
In half a hundred ways—
Some time some genius may arise
And dramatize some plays.
—Judge.

THE REAL THING

Burglars are stealing panama hats instead of diamonds, but they are having as much trouble about getting the real thing as if they were devoting their attention to the family silver.—Milwaukee Sentinel.

FOOLING THE NATIVES

A story is told of a Ceylon planter who wanted to go away for a day's shooting. Approaching his men, he said, "Although I myself will be absent, yet I shall leave one of my eyes to see that you do your work." And to the surprise of the natives, he took out his glass eye, placed it on the stump of a tree, and left. For some time the natives worked like elephants; but at last one of them, seizing his tin in which he carried his food, approached the tree and placed it over the eye. As soon as they saw that they were not being watched they all lay down and slept peacefully until sunset.—New York Tribune.

TWO OF BOOKER WASHINGTON'S STORIES

In a recent speech Booker T. Washington related the story of a negro who purchased a third-class ticket, and was assigned to a seat with the first-class passengers in a stage-coach. He was unable to understand the distinction, but when the stage tumbled into a ditch the driver called out:
"First-class passengers remain in your seats, second-class passengers get out and walk, third-class passengers get out and push."
Mr. Washington also said that early in his days as a school-teacher he found the log cabin in which he taught school too small, and determined to employ a hen-house as an annex. One morning he instructed a negro assistant to clean out the hen-house.
"What!" exclaimed the negro, in astonishment, "clean out a hen-house in the daytime?"—Philadelphia Press.

SAYING THE WRONG THING

"My niece Mary was always a well-meaning girl, but she would say the wrong thing almost every time," said one old gentleman to another; "and she's got a boy that's going to be her very counterpart."
The old gentleman's eyes twinkled, and his plain, good-natured face was puckered with enjoyment as he drew from his pocketbook a small sheet of note-paper.
"I sent Hal a toy monkey that plays all kinds of pranks when it's wound up," said he, chuckling. "Sent it to him for his birthday. Now listen to this letter of thanks I got from him to-day. He's just eight years old:
"DEER UNCLE NED:—I am delighted with the munkey, thank you. He makes me think of you very often. And whenever mama winds him up and he begins to jump, mama and I feel as if we were back at your house where all those toys are, and mama will look at the munkey and say, "That's your Uncle Ned all over."
"Good-by, from your gratfull HAL."
—Pittsburg Bulletin.

The Young People

As regards the full-grown Newfoundland, few boys would dare to ill use him.
This breed of dog should be gently taught to fetch and carry, to walk at the heels of his master, to lie down when told and take charge of property, and to swim—he should first be enticed to go into the water during play, and neither force nor hurry must be used. If well fed and treated he will gradually develop traits of character of which you can take advantage to teach him to do almost anything that a dog can do. In eighteen months the Newfoundland should have developed into a perfect gentleman of a dog; if he has not done so it is the fault of the trainer, not the dog. In general appearance he should be large—from twenty-six to thirty inches in height—jet-black, massive all over, long in body, showing great strength of neck and limb and loin, and with a straight, long coat and plentifully haired legs.
The collies are also excellent boys' dogs, and are not deceitful, as some believe. They are very handsome, faithful and kind, loving their owners, if kind to them, with an affection which nothing but death can extinguish. They are teachable and tractable if their education is begun very young; and if they have a fault, it is caused by their quick-wittedness and wisdom. Sometimes the collie is apt to jump at conclusions, and when the conclusion happens to be a neighbor's cat it is awkward. But the collie is extremely willing to please, and of no other dog can it be said with so much truth, "He is precisely what his master makes him." He is a very fashionable dog, is altogether wise and gentle in his ways, and is a good guard of person and property.
The ordinary Norfolk spaniel, white, brown and ticked, will make a very desirable dog for a boy, especially for the country. These dogs are gentle, lovable and companionable, seldom quarrel and fight, and will root around hedgerows, trees, copse or meadow all day long. They are as much at home in the water as out of it. Moreover, the Norfolk spaniel has the advantage of being so cheap that any boy may own one. They are most useful and serviceable country dogs, and at the same time very loving and gentle. The faces of some beam with intelligence and beauty, and if well kept and groomed they cannot fail to be favorites not only with the owners themselves, but with their friends. And this latter is saying a good deal.

The terrier brotherhood may be called the boys' dogs "par excellence." Given gentle treatment, a good bed and good feeding, and talked to rationally, they will do anything for their young master, and would even fight or die for him if need be. If a boy wants to know anything at all about dogs he should be conversant with this type, of which there are the Irish, Scotch and English terriers, with Bedlington, Airdales and Bull terriers.
As to feed and kennel no boy, or man or woman, either, has a right to own so faithful a companion as a dog who does not do all he or she can for his comfort, whether outdoors or indoors.
Indoor dogs may be allowed to sleep in any corner they choose, but there ought to be a piece of thick matting put down for them—not on a stone floor—and this should be kept very clean, often brushed, and sometimes washed and disinfected. Outdoor kennels should be protected from the weather and the sun. The door should be in front, not in the end, as in the old-fashioned barrel arrangement, and there should be no leakage. The bedding would best be wheat straw in summer, and oat straw in winter. Shavings of pine may do, but not hay, because that harbors insects.
Feed regularly at about the same hour every day, the rule to be a small breakfast followed by a walk, and a generous dinner followed by a long ramble. It need hardly be added that pure water, fresh every morning, is indispensable winter and summer if dogs are to be kept in the best of health.
Try, if possible, in all your dealings with your pet to imagine yourself in his place. Do not forget that your dog has feelings, moral as well as physical; that he will become exceedingly fond of you if you treat him with kindness and consideration. Never worry nor bully a dog, and never beat him. If you cannot manage him without harshness you have no right to own so noble an animal. Teach him obedience and cleanliness by firmness and persuasion. The uplifted finger of rebuke or the absence of a loving master's smile, showing the dog he has committed a fault, is greater punishment for him than blows from cane or whip.
Cropping ears, docking tails and roughly lifting dogs are barbarous cruelties. The first two practices are on a par with that of cutting a bird's tongue to make it talk.
S.

AS ABOVE REFERRED TO

One evening at dinner Ida was asked if she would have some squash. She answered, "No."
"No what?" asked her father.
"No squash," answered Ida.—Little Chronicle.

Some Early Fall Fashions



No. 4200.—“MONTE CARLO” CAPE. 10 cents.
Sizes, 34, 38 and 42 inches bust measure.

No. 4199.—NINE-GORED SKIRT. 11 cents.
Sizes, 22, 24, 26, 28 and 30 inches waist measure.

No wrap is more satisfactory or more comfortable for autumn wear than is the “Monte Carlo” cape. This coming season will see them in great numbers, both made to match the costume and of material suited to general use. The stylish costume illustrated is of broadcloth in a soft shade of biscuit-color, with bands of brown velvet, and is eminently smart. Both the cape and the new skirt, that is cut in seven gores and has a box-plait at each seam, are suited to all the season's materials. The cape in black peau-de-soie, and in black and soft-toned broadcloths is admirable for a general wrap. The skirt is in every way appropriate for house and street gowns and for a skirt worn with odd waists. The quantity of material required for the medium-size cape is three yards twenty-one inches wide, one and three fourths yards forty-four inches wide, or one and one fourth yards fifty-two inches wide, with one half yard of all-over lace for the collar; for the skirt, seven and one fourth yards twenty-seven inches wide, five and one half yards forty-four inches wide, or five and one eighth yards fifty-two inches wide where the material has a figure or nap, or four and three fourths yards forty-four inches wide or four yards fifty-two inches wide when the material has neither figure nor nap.

FINE NEW PATTERNS

Only 10 Cents Each

These patterns retail in fashion bazaars and stores for twenty-five to forty cents each, but in order to increase the demand for our paper among strangers, and to make it more valuable than ever to our old friends, we offer them to the lady readers of our paper for the low price of 10 cents each. Or

FREE We will give any two of these patterns for sending ONE yearly subscription, new or renewal, to the Farm and Fireside at the clubbing price, 35 cents.

Or we will send the Farm and Fireside the remainder of this year and **Only 25 Cents** any ONE pattern for

Present subscribers accepting this remainder-of-the-year offer will have six months added to their subscription.

ANY ONE ACCEPTING OUR OFFER INCLUDING A SUBSCRIPTION TO THE FARM AND FIRESIDE IS ALSO ENTITLED TO ONE FREE COUNT IN THE DOT CONTEST

See next page. An order for patterns alone does not entitle any one to a count.

Full descriptions and directions—as the number of yards of material required, the number and names of the different pieces in the pattern, how to cut and fit and put the garment together—are sent with each pattern, with a picture of the garment to go by. These patterns are complete in every particular, there being a separate pattern for every single piece of the dress. All orders filled promptly.

For ladies, give BUST measure in inches. For SKIRT patterns, give

WAIST measure in inches. For misses, boys, girls or children, give both breast measure in inches and age in years. Order patterns by their numbers.

Satisfaction guaranteed or money refunded.

To get BUST and BREAST measure, put the tape-measure ALL of the way around the body, over the dress, close under the arms.

Special price of each pattern 10 cents. Postage one cent EXTRA on skirt, tea-gown and other heavy patterns.

Address FARM AND FIRESIDE, Springfield, Ohio



No. 4198.—FANCY WAIST. 10 cents.

Sizes, 32, 34, 36, 38 and 40 inches bust measure.

No. 4014.—GRADUATED FLOUNCE SKIRT. 11 cents.
Sizes, 22, 24, 26, 28 and 30 inches waist measure.

The first autumn gowns require only the lightest possible wraps. This handsome costume is made with a novel waist that includes bolero fronts and gives the pleasant sensation of an outdoor garment without uncomfortable warmth. As shown, the material is currant-red etamine, with trimming of black and white braid, and the front and undersleeves are of twine-colored lace, but all the season's suiting materials are appropriate. The skirt is new and in every way satisfactory. The front gore is plaited and stitched flat to the flounce-depth, while the sides and back are lengthened by a graduated flounce. The quantity of material required for the medium-size waist is three and five eighths yards twenty-one inches wide, three and one half yards twenty-seven inches wide, or two yards forty-four inches wide, with one and one fourth yards of all-over lace; for the skirt, nine and three fourths yards twenty-one inches wide, eight yards twenty-seven inches wide, five yards forty-four inches wide, or four yards fifty-two inches wide.



No. 4176.—LOUNGING-ROBE. 11 cents.
Sizes, 32 to 40 inches bust.

No. 3980.—LADIES' WRAP-
PER WITH SQUARE YOKE. 11 cents.
Sizes, 32 to 42 inches bust.



No. 4183.—GIRLS' SAILOR-
SUIT. 10 cents.
Sizes, 6 to 12 years.

No. 4186.—SQUARE-YOKE WAIST. 10 cents.
Sizes, 32 to 40 inches bust.



No. 4196.—CHILD'S GUIMPE FROCK. 10 cents. Sizes, 2 to 8 years.



No. 4191.—PLAIN SHIRT-WAIST. 10 cents.
Sizes, 32 to 42 inches bust.

No. 4173.—GIRLS' GUIMPE
DRESS. 10 cents.
Sizes, 4 to 8 years.



No. 4188.—ROUND-YOKE WAIST. 10 cents.
Sizes, 32 to 40 inches bust.

No. 4137.—GIRLS' COSTUME. 10 cents.
Sizes, 8 to 14 years.



No. 4046.—BOYS' KNEE TROUS-
ERS AND KNICKERBOCKERS. 10 cents. Sizes, 4 to 12 years.



No. 4147.—“SLOT-SEAM” SKIRT. 11 cents. Sizes, 22 to 30 inches waist.

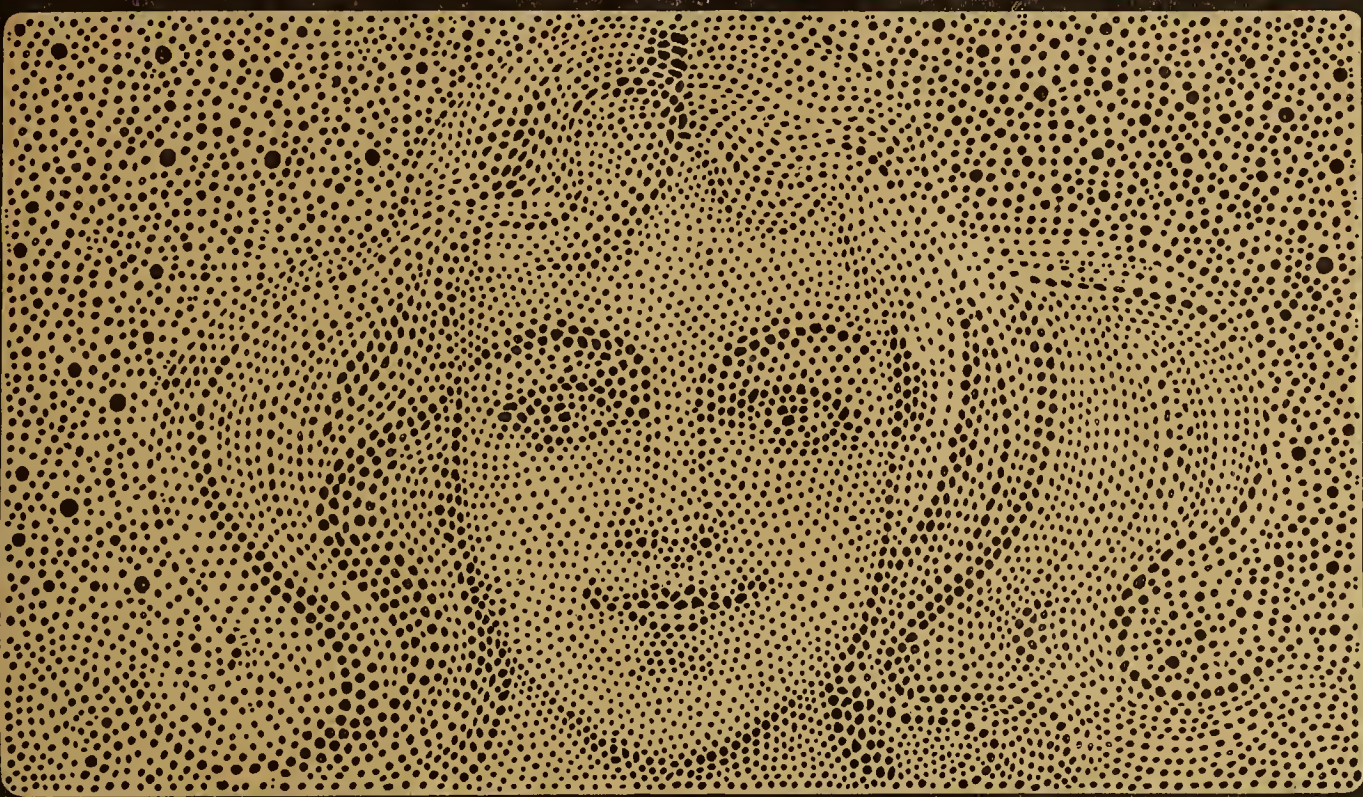


No. 4169.—GIRLS' UMBRELLA
DRAWERS. 10 cents.
Sizes, 8 to 16 years.



No. 4072.—MEN'S BOSOM
SHIRT. 10 cents.
Sizes, 32 to 44 inches breast.

The \$1,500.00 Contest Ends this Month



PATENT APPLIED FOR, 12-6-01

Count the
Dots Now

IT MAY
BRING YOU
\$500.00
CASH

Don't let the
opportunity slip

FIFTEEN HUNDRED DOLLARS CASH PRIZES WILL BE GIVEN FOR THE CORRECT OR NEAREST CORRECT COUNTS OF THE DOTS IN THE ABOVE DIAGRAM

Every one sending 35 cents, the regular clubbing price, for one year's subscription to the Farm and Fireside will be allowed ONE count of the dots free.

Three yearly subscriptions and *three* counts (either for yourself or others) for One Dollar.

REGULAR SUBSCRIBERS will have their time extended for a number of years equal to the full amount of money they send in. You may accept any offer we make in this issue including a subscription to the Farm and Fireside and send one count with it.

| | | | |
|--------------|--------------|------------|------|
| FIRST PRIZE | - | \$500.00 | Cash |
| Second Prize | - | \$200.00 | Cash |
| Third Prize | - | \$100.00 | Cash |
| 4 Prizes, | \$25.00 each | \$100.00 | Cash |
| 10 Prizes, | \$10.00 each | \$100.00 | Cash |
| 40 Prizes, | \$5.00 each | \$200.00 | Cash |
| 150 Prizes, | \$2.00 each | \$300.00 | Cash |
| Total | | \$1,500.00 | Cash |

FAIR WARNING

DOT CONTEST CLOSES THIS
MONTH—AUGUST

Everybody has an equal opportunity to win a cash prize. Is your count in?

This is the Opportunity of Your Lifetime

The count is absolutely free. Every cent paid is applied on your subscription. You can count as many times as you want. Send 35 cents with each count. Each count will then be registered, and you will receive a full year's subscription to the FARM AND FIRESIDE for every 35 cents you send in.

This magnificent offer is made for the exclusive benefit of the readers of the FARM AND FIRESIDE. The contest is new, and was gotten up to test the skill of our readers, and to give them profitable amusement and entertainment. Send your count at once, and so make sure of being included in the list of contestants for these cash prizes.

The more counts you send in the greater your chance of winning one of the big cash prizes. Count the dots half a dozen times, and you will be almost sure to send in the correct answer.

This is a splendid opportunity to win a great cash prize as the reward of only a little perseverance and care. The exact number of the dots can be counted by any one at the price of a little time.

The prizes are so great that you have a big chance of winning hundreds of dollars for the short time it takes to count the dots.

If two or more give the correct count the grand prize will be divided, and the same method will be adopted in awarding the other prizes.

Even if your answer is not correct you may get a prize, because the money goes to those who send in the correct or nearest correct counts. We do not care who wins the prizes. They are yours if you have the skill and perseverance.

No one employed by or connected in any way with the FARM AND FIRESIDE, nor any resident of Springfield, Ohio, or its suburbs, will be allowed to enter the contest.

If possible, use the subscription blank printed on this page; or, if desired, a sheet of paper may be used the same size as the blank printed on this page.

Use This Coupon, if Possible, or Cut a Piece of Paper Same Size as This Coupon

Cut along this line

FARM AND FIRESIDE
Springfield, Ohio

My count (or
counts) of the
dots is:

Inclosed find
(Amount of money)

to pay for subscription
(State whether one or three years)

to the Farm and Fireside.

Name

Post-office

County..... State.....

Are you a new or old subscriber?
(Write "New" or "Old")

ADDRESS FARM AND FIRESIDE, SPRINGFIELD, OHIO

Farm Selections

NEWS-NOTES

ADVICES from Aroostook County, Maine, indicate that the seed which was planted is rotting, consequently a shortage in this year's potato crop is predicted.

The beet-sugar acreage in Germany this year is reported to be ten per cent less than that of last year, which was one million sixty thousand four hundred and seventy-two acres.

Twenty car-loads of Texas wheat of this season's crop was received at Galveston June 11th. The price a bushel offered by the exporters on that date was seventy-five cents.

It is now reported that the Beaumont, Texas, crude oil when mixed with ten times its bulk of water has been found to be a complete exterminator of lice on cabbages. It is applied with an ordinary sprayer.

The Ohio Creamery & Supply Co., of Cleveland, Ohio, which was recently incorporated, expects to make fifteen hundred pounds of butter hourly from pure milk by a method recently introduced. An ice-making apparatus constitutes a part of the plant.

Prof. J. W. Wilson, son of the present Secretary of Agriculture, has accepted the chair of animal husbandry in the South Dakota Agricultural and Medical College, and the position of director of the state experiment station, which is also located at Brookings.

A new marmalade-factory has been erected at Redlands, Cal., having a capacity of three hundred gallons a day. Marmalade is a preserve or confection of pulpy consistency made from various fruits such as the orange, lemon, pineapple, or the ordinary fruits such as the apple, pear, plum, quince, etc. * * *

CATALOGUES RECEIVED

Sandwich Mfg. Co., Sandwich, Ill. Illustrated catalogue of hay-presses.

Bell Bros. & Stevenson, Marysville, Ohio. Descriptive folder of farms for sale.

Swift & Co., Chicago, Ill. Illustrated hanger of Swift's blood and bone fertilizers.

Globe Fence Company, Delevan, N. Y. Illustrated catalogue of the Globe stiff steel fence-stays.

The Hard Steel Wire Fence Company, Cuyahoga Falls, Ohio. Illustrated catalogue of hard steel fencing.

Deering Harvester Company, Chicago, Ill. Illustrated catalogue of the Deering corn husker and shredder.

G. Elias & Bro., Buffalo, N. Y. Descriptive catalogue of stave silos and combined cutters and blowers.

The Berger Mfg. Co., Canton, Ohio. Descriptive circular of the "Twentieth Century" galvanized-steel pump.

Moseley & Stoddard Mfg. Co., Rutland, Vt. Illustrated pamphlet, "Silos: Their Advantages and Construction."

The Hickox, Mull & Hill Co., Toledo, Ohio. Illustrated catalogue of farm implements, vehicles, harness, seeds, etc.

The Vine & Root Machinery Co., Port Huron, Mich. Illustrated catalogues of farm-tools for peas, beans, beets and chicory.

Kalamazoo Stove Company, Kalamazoo, Mich. Illustrated catalogue of stoves and ranges sold direct from factory to user on trial.

American Tin Plate Company, Pittsburgh, Pa. Illustrated pamphlet on the history and manufacture of tin and terne plates for roofing.

Dr. F. B. Van Nuys, Tiffin, Ohio. Illustrated catalogue of Barred Plymouth Rocks, Scotch Collie dogs, pea-fowls and poultry-keepers' supplies.

The De Laval Separator Company, New York. Pamphlet, "Good Butter: Its Source and How it is Made." Illustrated hanger of cream-separators.

Waldo F. Brown, Oxford, Ohio. A concise, practical "Booklet on Sorghum, Stock Beets, Strawberries, Cement Floors, Hog-house, Soy-beans, etc." Price ten cents.

Your mid-summer orders will receive our prompt attention.

We have everything for hot weather.



Built on Rock

SUBSTANTIAL—FIRM—RELIABLE

Thirty years of successful merchandising on a firm, substantial basis, employing clean, upright methods—the kind that insure positive reliability—a firm worthy of your patronage. We already enjoy the confidence of over half the people in your county but we want yours also. Ask your neighbors about us if you doubt our ability to serve you properly—you will be surprised to find how many customers we have in your vicinity. If we can please others we can please you.

PRELIMINARY ANNOUNCEMENT—Our new catalogue No. 71 will be ready about September 1st. Our buyers have scoured the markets of the world for honest, up-to-date goods, to quote in this catalogue, and it will be beyond doubt the finest catalogue ever issued by any mercantile firm. We want every reader of this paper to send for a copy. It will be sent, all charges paid, upon receipt of 15 cents—this amount only half pays the postage, but it is sufficient to show us that you are acting in good faith.

Applications may be sent in now, and we will forward the catalogue as soon as it is issued—about September 1st. Ask for catalogue No. 71, and enclose 15 cents in either stamps or coin. Why not do it now?

Montgomery Ward & Co., Chicago



FOR BROOD SOWS AND PIGS.

VOLIN, SOUTH DAKOTA.

International Stock Food Co., Minneapolis Minn.

GENTLEMEN:—"International Stock Food" gives excellent satisfaction to all my customers. I have used it and can say that for brood sows and young pigs it is the best preparation I have ever used, both to maintain health and promote growth.

L. G. PALMER,
Druggist and Stockraiser.

"International Stock Food" is prepared from Herbs, Seeds, Roots and Barks.

A \$3000.00 STOCK BOOK FREE

IT CONTAINS 183 LARGE FINE ENGRAVINGS OF HORSES, CATTLE, SHEEP, GOATS, HOGS, POULTRY, ETC.

The Covers are Printed in Six Brilliant Colors. It costs us \$3000 to have our Artists and Engravers make these Engravings. Our International Stock Book contains a finely illustrated Veterinary Department that will save you hundreds of dollars. This illustrated Stock Book also gives Description and History of the different Breeds of Horses, Cattle, Sheep, Goats, Hogs and Poultry of All Kinds. The Editor of this Paper will tell you that you ought to have our Stock Book for reference.

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This Book Mailed Free, Postage Prepaid, If You write Us (letter or postal) and Answer These 3 Questions: 1st—Name this Paper. 2nd—How much stock have you? 3rd—Did you ever use "INTERNATIONAL STOCK FOOD" for Horses, Cattle, Sheep, Hogs, Colts, Calves, Lambs or Pigs?

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Capital Paid In, \$1,000,000.

International Stock Food Co., MINNEAPOLIS, MINN., U. S. A.

DEALERS SELL THESE ON A "SPOT CASH" GUARANTEE

INTERNATIONAL STOCK FOOD
INTERNATIONAL POULTRY FOOD.
INTERNATIONAL LOUSE KILLER.

INTERNATIONAL WORM POWDER
INTERNATIONAL COLIC CURE
INTERNATIONAL HARNESS SOAP.

INTERNATIONAL GALL CURE
INTERNATIONAL HEAVE CURE.
SILVER PINE HEALING OIL, ETC.

The "ELI" Packs the Freight Car.

It is a hay baler. It delivers the hay in solid, shapely bales that permit you to ship all you pay freight on. There is

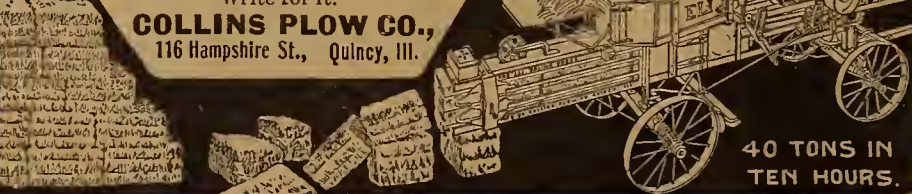
NO COMPETITOR IN THE "ELI" CLASS.

Buy it for rapidity of work, safety, strength. Large feeding hole with double expanding condenser gives great speed and capacity. Automatic block placing device does the work for the man. Adapted to steam or horse powers. Does most work in least time with minimum of power. There is

Money for the Man Who Buys the "Eli."

Illustrated catalogue mailed free. Write for it.

COLLINS PLOW CO.,
116 Hampshire St., Quincy, Ill.



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IT STANDS FOR BIG CROPS.

For uniform drilling of grains, any kind and any amount per acre for grass seed sowing and even distribution of lumpy, damp or dry fertilizers, nothing equals the

SPANGLER Low-Down Drill

Grain and Fertilizer Positive force feed for fertilizer, grain and grass seed. Drills any depth, perfect regulation, low steel or wood frame, high wheels with broad tires. Easy to fill and operate. Light draft. Investigate before buying. Write for free catalogue. SPANGLER MANFG. CO., 515 QUEEN STREET, YORK, PA.

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UNCLE SAM DELIVERS IT FREE.

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5000 Bicycles, overstock. For 30 days only we will sacrifice at less than actual factory cost

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Choice of M. & W. or Record tires and best equipment on all our bicycles. Strongest guarantee.

We SHIP ON APPROVAL C.O.D. to anyone without a cent deposit & allow 10 DAYS FREE TRIAL before purchase is binding.

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MEAD CYCLE CO. Dept. 82W, Chicago.

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FREIGHT CHARGES PAID BY US

Strictly new, perfect, Semi-Hardened Steel Sheets, 2 feet wide, 6 feet long. The best Roofing, Siding or Cladding you can use. No experience necessary to lay it. An ordinary hammer or hatchet the only tools you need. We furnish nails free and paint roofing two sides. Comes either flat, corrugated or "V" crimped. Delivered free of all charges to all points in the U. S., east of the Mississippi River and North of the Ohio River

AT \$2.25 PER SQUARE

Prices to other points on application. A square means 100 square feet. Write for free Catalogue No. 34.

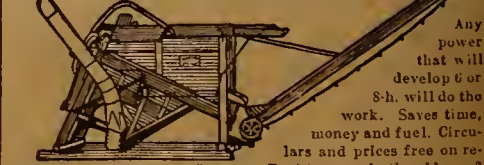
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your corn all at one operation—Quickly, Safely, Cheaply with

THE ROSENTHAL

CYCLONE CORN HUSKER



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25 designs, all steel. Handsome, durable. Cheaper than a wood fence. Special inducements to church and cemeteries. Catalogue free. KOKOMO FENCE MACHINE CO.,
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Vol. XXV. No. 22

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AUGUST 15, 1902

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24 NUMBERS

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AS SECOND-CLASS MAIL MATTER

TERMS OF SUBSCRIPTION { One Year (24 Numbers) . . 50 Cents
Six Months (12 Numbers) . . 30 Cents.

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Subscribers receive this paper twice a month, which is twice as often as most other farm and poultry journals are issued.

Payment, when sent by mail, should be made in Express or Post-office Money-orders, Bank Checks or Drafts. When neither of these can be procured, send the money in a registered letter. All postmasters are required to register letters whenever requested to do so. Do not send checks on banks in small towns.

Silver, when sent through the mail, should be carefully wrapped in cloth or strong paper, so as not to wear a hole through the envelop and get lost.

Postage-stamps will be received in payment for subscriptions in sums less than one dollar, if for every 25 cents in stamps you add one one-cent stamp extra, as we must sell postage-stamps at a loss.

The date on the "yellow label" shows the time to which each subscriber has paid. Thus: Sept 1902 means that the subscription is paid up to September, 1902; Oct 1902, to October, 1902, and so on. When a coin-card order-blank is inclosed with your paper it means your time is out and is an invitation to you to renew.

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When renewing your subscription do not fail to say it is a renewal. If all our subscribers will do this a great deal of trouble will be avoided. Also give your name and initials just as now on the yellow address label; don't change it to some other member of the family; if the paper is now coming in your wife's name, sign her name, just as it is on label, to your letter of renewal.

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Always name your post-office.

COMMENT

AMERICAN PRODUCERS AND CONSUMERS

"Every man, woman and child in the United States," says Senator Gallinger, "is equal to ten persons outside of the United States, particularly as consumers of our own and the world's products of agriculture, mining and manufacture. The farm-laborers of Europe do nine times the work and get double the result of the farm-laborers in the United States. That is, it takes four and one half Europeans to equal one American. Extend the comparison to Asia and Africa and we find that the average United States producer is equal to ten the world over, outside of our country. This comparison is emphasized by our coal-consumption and steam-power, and, finally, by our products of manufacture. We are to-day practically independent of the rest of the earth. In a few years we shall raise our own sugar and fibers, manufacture our own silk, and in fact we shall produce almost everything used by mankind."

CENSUS FARM FIGURES

The bulletin on American agriculture recently issued by the Census Bureau deals with large figures, and sets forth a remarkable record of advancement. It shows that there were, June 30, 1900, 5,739,657 farms in the entire country, which were valued at \$16,674,694,247. Of this amount \$3,560,198,191, or over twenty-one per cent, represented the value of buildings, and \$13,114,492,056, or over seventy-eight per cent, represented the value of lands and improvements other than buildings. The value of farm implements and machinery was \$761,261,550, and of live stock, \$3,078,050,041. These values added to the value of the farms give the total value of farm property \$20,514,001,838.

The total value of farm products for the year 1899

AFFAIRS OF NOTE AND MEN OF MARK

is given at \$4,739,118,752, of which amount \$1,718,990,221 was for animal products, including live stock, poultry and bee products.

The bulletin places the average size of farms in the United States at one hundred and forty-six acres, and forty-nine per cent of the farm-land is improved. The total acreage for the entire country was 841,201,546.

The number of farms in the United States has increased in every decade for the last fifty years, and so rapidly that in 1900 there were nearly four times as many farms as in 1850 and twenty-five per cent more than in 1890. The total acreage of farm-land also has increased, but up to 1880 less rapidly than the number of farms, thus involving a steady decrease in the average size of farms. Since 1880, however, the total acreage has increased more rapidly than the number of farms, so that the average size of farms has increased. The total area of improved land has increased in every decade since 1850.

The total value of farm property in the United States in 1900 was more than five times as great as in 1850, and 28.4 per cent greater than 1890. The gain in the last decade was distributed as follows: In land-improvements and buildings, \$3,395,437,598; in implements and machinery, \$267,014,083; and in live stock, \$969,282,462. The rates of gain for these items were 25.6, 54 and 39.4 per cent respectively. The value of domestic animals in the United States in 1900 was about \$3,260,000,000, of which amount the value of animals on farms and ranges constituted over ninety-six per cent.

A comparison by states indicates that the most important states in the agriculture of the country are, beginning at the West, Missouri, Iowa, Illinois, Indiana, Ohio, Pennsylvania and New York. Together they contribute forty-four per cent of the total value of farm property and thirty-eight per cent of the total value of farm products.

Texas leads with the greatest number of farms, 352,190, and also with the highest acreage, 125,807,017. But only a little over fifteen per cent of the farm-land in Texas was improved, and the value of the farm-land in Texas was less than in Pennsylvania, Ohio, New York, Missouri, Iowa or Illinois, being \$962,476,273. Missouri ranks second in the number of farms, having 284,886. Other states having more than 200,000 farms are: Alabama, 223,220; Georgia, 224,691; Illinois, 264,151; Indiana, 221,897; Iowa, 228,662; Kentucky, 231,667; Michigan, 203,261; Mississippi, 220,803; New York, 226,720; North Carolina, 224,637; Ohio, 276,719; Pennsylvania, 224,248; Tennessee, 224,623. Iowa leads the list in the percentage of improved lands, more than eighty-six per cent of the farm-lands of that state being improved. Illinois follows with more than eighty-four per cent; Ohio comes next with seventy-eight per cent, and is followed by Indiana with more than seventy-seven per cent. Illinois occupies the first position in the matter of the total value of farm-lands, the figures for that state being \$2,004,316,897.

The leading states, measured by total value of farm property and value of farm products are the following:

| | VALUE OF FARM PROPERTY | VALUE OF FARM PRODUCTS |
|-------------------|------------------------|------------------------|
| Iowa..... | \$1,834,345,546 | \$365,411,528 |
| Illinois..... | 2,604,316,897 | 345,649,611 |
| Ohio..... | 1,198,923,946 | 257,065,826 |
| New York..... | 1,069,723,895 | 245,270,600 |
| Texas..... | 962,476,273 | 239,826,344 |
| Missouri..... | 1,033,121,897 | 219,296,970 |
| Kansas..... | 864,100,386 | 209,895,542 |
| Pennsylvania..... | 1,051,629,173 | 207,895,600 |
| Indiana..... | 978,616,471 | 204,450,196 |
| Nebraska..... | 747,950,057 | 162,696,386 |
| Minnesota..... | 788,684,642 | 161,217,304 |
| Wisconsin..... | 811,712,319 | 157,445,713 |
| Michigan..... | 690,355,734 | 146,547,681 |
| California..... | 796,527,955 | 131,690,606 |
| Kentucky..... | 171,045,856 | 123,266,785 |

Gen. John R. Brooke, the senior major-general of the army, recently placed on the retired list on account of the age-limit, was born in Westmoreland County, Pennsylvania, July 21, 1838. General Brooke made a distinguished record in the Civil War. Entering as a captain in a Pennsylvania regiment of volunteers, he advanced to the grade of brigadier-general, and was brevetted three times for gallant and meritorious services. In 1866 he entered the regular army as a lieutenant-colonel, and, advancing in regular order, reached the rank of major-general in 1898. In the Spanish-American War he served as department commander in the South, as division commander in the Porto Rican campaign, as one of the American commissioners to arrange for evacuation of the island, as military-governor of Porto Rico, and as military-governor of Cuba.

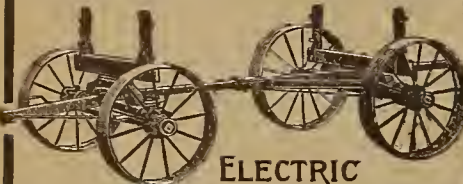
Major-General Adna R. Chaffee has been relieved of command in the Philippines, where he has made a most admirable record, and placed in command of the Department of the East, with headquarters at New York. Having entered the army as a private in 1861, General Chaffee is now in his forty-second year of active military service, and has reached the highest rank obtainable in the regular order of promotion. Throughout his career as a soldier—in the Civil War, on the Western frontier, in Cuba, in China and in the Philippines—his record is highly honorable. The recent order of the War Department, assigning him to the choicest command in the army, is in recognition of his good services during the past four years.

The prolonged strike of the anthracite-coal miners keeps the public eye on Mr. John Mitchell, the president of the United Mine Workers of America. That as their leader he wields a wonderful power over them is plainly shown by the action of the recent national convention of miners at Indianapolis. The convention was called to consider the advisability of a sympathetic strike by all the miners in the bituminous-coal regions, and this action was strongly advocated. But as it would involve violation of contracts, with consequent dishonor to the union, President Mitchell threw the weight of his influence against it, and prevailed, and the convention decided against a general strike.

The Right Honorable Arthur James Balfour, who recently succeeded his uncle, Lord Salisbury, as the premier of Great Britain, was born in Scotland July 25, 1848. He was educated at Eton and Trinity College, Cambridge, and entered Parliament at the age of twenty-six. In his public career he has served as privy councilor, secretary for Scotland, chief secretary for Ireland, party leader in the House of Commons, and first lord of the treasury. In public affairs he has been the pupil, associate and adviser of his famous uncle, and their political views and policies are the same. Mr. Balfour holds first rank as a debater, has high administrative ability, is conspicuous as a "scholar in politics," and is the author of two notable books—"Defense of Philosophic Doubt" and "Foundations of Belief."

Wise Man's Wagon.

The man who has had experience in running a wagon knows that it is the wheels that determine the life of the wagon itself. Our **ELECTRIC STEEL WHEELS** have given a new lease of life to thousands of old wagons. They can be had in any desired height and any width of tire up to 8 inches. With a set of these wheels you can in a few minutes have either a high or a low down wagon. The Electric Handy Wagon is made by skilled workmen, of best selected material—white bickory axles, steel wheels, steel bounds, etc. Guaranteed to carry 4000 lbs. Here is the wagon that will save money for you as it lasts almost forever. Our catalog describing the uses of these wheels and wagons sent free. Write for it. **ELECTRIC WHEEL CO., BOX 98 QUINCY, ILLINOIS.**



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Profit in Hay Baling
demands big capacity. You get it in the **SOUTHWICK**

Two Horse Full Circle PRESS.

40 by 18 inch feed opening.

Solid, even bales fill cars and save freight. Bridge 7 inches high. Press stands up to its work—so does the tier—no digging holes for wheels. Adapted to bank barns. King among balers. Write for free catalogue.

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SPENCER'S



ALLIGATOR BOX PRESS
can bale 22 tons of hay in 10 hours or **NO PAY.**
Circulars Free.

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Until You Have Seen **CAREY'S** Magnesia Flexible Cement **ROOFING**

It Can't Be Equalled For Durability. For Flat or Steep Roofs QUICKLY APPLIED.

Sample Cat. and full information mailed upon request, Free. The Phillip Carey Mfg. Co., 16 Wayne, Lockland, O.



You Get More Bales


In the Gar when the hay is baled with an **"ELI" BALING PRESS.**

That saves freight and adds to profit. Feed hole 53x30 ins. makes it easy to est and safest to feed. Remember—this is not a bundle, it is a press. Automatic block placing device saves time, arms and hands. Requires less power than any other machine of equal capacity. **ILLUSTRATED CATALOGUE FREE.**

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Mr. Greiner Says:

FRUIT CONTINUES TO DROP from the trees, but not in price. Our earlier fears of an unprecedented plethora in fruits, it seems now, were groundless. I see no chance for fruit of any kind to be very cheap this year.

DWARF ESSEX RAPE.—Do not neglect to sow a little seed of Dwarf Essex rape, preferably in drills, just as soon as you have a vacant spot of ground in the garden or field. It is still time for it, and the rape will give a big lot of late fall and winter feed for sheep, pigs, poultry, etc.

THE COAL-PROBLEM.—In view of present coal prices, miners' strikes, etc., we may well begin to make efforts in the direction of solving the problem where to get heat and light when coal for some reason becomes unavailable. It seems to me that the case is similar to that of our nitrogen-supply. Surrounded by nitrogen we must, and will, find (or have already found) a way to help ourselves to it just as freely as we may wish. And don't we have the most powerful generator of heat where we should learn how to make use of it? The heat of the sun is free to everybody. It cannot be monopolized. It comes to one place as well as to another. All we need is to learn how to control and store the heat of this great natural generator.

APPLES FOR HOME USE.—A reader in Pennsylvania desires to set twenty-five apple-trees to give him a succession of fruit from earliest to latest, and would like to have some advice as to the selection of varieties. I would want one Red Astrachan, one Early Harvest or Yellow Transparent, one Oldenburg, one Gravenstein, one Twenty Ounce, one King, possibly an Alexander or Wealthy, and one Pound Sweet. These would give a succession of fruit from summer until Christmas or later. For jelly purposes you may want a Transcendant or Hyslop crab. For later use I would want a Fameuse (late fall), a Greening, a Swaar, a Pommegris (small, but good), a Northern Spy, a Seek-no-Further, a Spitzenburgh, a Rome Beauty or Sutton Beauty, a Wagener, a Tallman and a Bailey Sweet, a Yellow Bellflower, a Newtown Pippin, a York Imperial, a Roxbury Russett and a Baldwin or two. There you have your twenty-five varieties.

BIRD-DEPREDACTIONS.—One of the peculiarities of this rather peculiar season is the unusually frequent complaints about bird-depredations. The columns of past issues of the FARM AND FIRESIDE bear witness that I am a friend of our little feathered songsters. I have even said many a good word (at considerable risk, too, in facing a strong prejudice against it) for the English sparrow. I have always held that the laborer is worthy of his hire, and that if we like to have birds keep injurious insects in check we must expect to pay them for it, sometimes in berries or in cherries, or in other ways. In a general way I have had the same sympathy with birds which a writer in the New York "Tribune Farmer" expresses as follows: "It is only a small percentage of the large family of birds that offends in this respect—that is, by eating our fruit. Chief among them is the cat-bird, robin, cedar-bird and oriole. A farm would be poor indeed that could not afford some fruit in payment for the song of the robin, the cheerful scolding of the cat-bird, the pretty, quiet ways of the little cedar-bird, and the brilliant plumage and song of the oriole, particularly as most of the time they work hard for their living." Opposing this sentiment comes a writer from Massachusetts in the "Rural," who says: "Concerning the suppression of insect-pests by birds I think the current teachings of the time are erroneous. The greatest assistance man receives in this line is from predaceous insects. Birds do not discriminate between insects injurious to vegetation and predaceous insects. If in feeding they take say twenty of the former to one of the latter, their helpfulness to the farmer would not be certain. The fact is, they feed in such an indiscriminate way that it is doubtful whether birds ever seriously affect the balance between injurious and predaceous insects." The truth lies probably in the middle. Some scientist has asserted that this globe would become uninhabitable for human beings if every bird on it were destroyed. I don't believe it. In fact, I feel that in our warfare against injurious insects we have finally to rely on our own efforts and the use of insecticides. Yet those among the birds which stay with us through the winter—the English sparrow among them—are of great help in clearing trees and shrubs of the eggs of insects and the fields of weed-seeds. Their good services should be appreciated. How to deal with the birds should be decided by common sense and local considerations. English sparrows, although sometimes in flocks on my place, seldom do me any appreciable damage, and I do not molest them. If they would drive English robins, cedar-birds and cat-birds off the place, especially during strawberry and cherry time, I would think still more of them, for these native birds do tenfold, yes a thousandfold, the damage that the imported sparrows do. Although we have quite a number of sweet-cherry trees on the place I cannot get a single quart to can. The flocks of native songsters strip a large sweet-cherry tree within a few days after the fruit begins to color. I am willing to divide with the birds, but do not like to let them take it all. They get a good share of my strawberries, and every sweet cherry, and lots of other things. It's too much. If English sparrows should become very troublesome by sheer numbers (and they often come in swarms upon the wheat-fields) I would try to shoot or trap them. I do not know why we should treat English robins and other bad bird-robbers differently. Most of them are killed by pot-hunters in the fall, anyway. But let the shot-gun policy be the last resort. There is no sense in a law that attempts to prevent a fruit-grower from protecting his property against thieves, and no likelihood of such law being enforced.

Mr. Grundy Says:

THE VARIOUS VOTES on the Oleomargarine Bill would seem to indicate that in the mind of the average office-getting politician the farmer is a rather small potato. It would appear that quite a large number of politicians are as much opposed to enacting laws to prevent fraud in the sale of food products as they would be to cutting down their own fat salaries.

THE FARMER'S VOTE.—In all districts there are two or more candidates for the various offices, and the vote of the farmer is his own. If he is not blinded by partizanship he will put that vote where it will do him the most good—he will vote for his own interests as others do for theirs. He will not allow the corner-loafer partizan politician to "scare him into line," but he will quietly vote for the man who will look after his interests as well as those of others. It is this silent vote that politicians fear. It is a vote that has righted many a wrong and proved the undoing of many a puffed-up swaggering politician.

THE SONG OF THE PARTIZAN POLITICIAN and the lullaby of the ox-like "son of the soil" who teaches "pure farming for simple-minded farmers" has always been against farmers taking a hand in politics. "You tend to your farming and we'll take care of the country!" says the former. "Don't meddle with it. It creates ill-feeling, and should be carefully avoided!" whispers the latter, tremulously. The former desires to manage the affairs of the country for a goodly consideration, and he does not wish to be interfered with, especially when there is a chance for a "rake off." Farmers should vote as he directs, because he has "looked into" the situation and knows all about it, and in whispers, with many cunning winks and nods, he shows up the rottenness of the opposition and their evil designs, and how he has knocked them out by skilful management, all in the interest of good government.

THE MISTAKE most farmers make is in confounding politics with partizanship. One is the science of government; the other, adherence to a party or faction—very often unreasonable, senseless adherence to it. Every farmer should be interested in politics, because this is a government of the people, by the people. It is a good idea to identify one's self with one of the great political parties, because it gives one a certain standing in the community. One can be a partizan to that extent and still not lose his individuality. But blind adherence to a party in all contests, especially local, is senseless.

POLITICS ARE TABOOED in farmers' institutes and other farmers' meetings, also in many agricultural journals, for the reason that many farmers cannot disassociate politics from partizanship. Let one say "tariff" in a farmers' meeting and instantly he has every ear, and bristles begin to rise in all parts of the audience. A short time ago the word "silver" would straighten up every auditor. A speaker may jump onto the "trusts" with both feet and little or no friction is created. He can talk farm animals, fowls and grains, and so long as he is interesting he holds the attention of the progressive portion of his audience. If he sings a song or tells a funny story he gets the attention of the entire outfit. He may do any of these things, but he must not mention politics. Sometimes the policy of a party is directly inimical to the best interests of agriculture, still the matter must not be mentioned in a farmers' meeting. Measures of vital interest to farmers cannot be discussed, because one of the parties have rung them into politics, and so many men are so blinded by partizanship that they will not have a policy, advocated or opposed by their party, fairly discussed. Let us hope farmers will be educated out of this folly.

WHEN A PUBLIC OFFICER PROVES to be efficient, trustworthy and obliging, in short just the man for the place, do not vote him out at the dictation of some party-boss who wants the place for a henchman or just because he belongs to the opposite party. Merit should stand above party. I have seen good men voted out of office simply because they paid more attention to their duties than to booming the party or playing into the hands of the bosses. To be sure, the voters were to blame, but they were misled or frightened into voting as they did by self-constituted bosses, whose serfs they allowed themselves to be.

Do not be a political serf. Be independent of bosses, and vote for the best men and the best interests of the community. You will note that the men who most loudly denounce the independent voter are always ready to make a dicker with the bosses of the opposition, if by so doing they can gain any personal advantage. To them the man who insists on doing his own thinking and voting is a mugwump, turncoat or flopper. Political dickers, trades and alliances are their exclusive prerogatives which the common voter must not question. But if the common voter declines to do their bidding and vote as they dictate he is blacklisted. The farmer should be the most independent voter in the world, because the boss has no power to harm him in the least, as he can the small merchant or the working-man.

EXPERIMENTS.—"No two seasons are alike, and a single experiment in farming counts for very little," said a veteran farmer to me many years ago. I have since learned that he was right. Every year the conditions under which the several crops are grown are different, and if a crop is a grand success this season we cannot be sure that it will be next season. Some crops will succeed under many conditions, while others must have a season exactly suited to them to yield well. The first are crops on which to depend, while the latter will do to grow in a limited way.

All Over the Farm

CULTIVATING COW-PEAS

THE Southern cow-pea is one of the most satisfactory catch-crops that can be grown on farms almost anywhere in the winter-wheat belt. It is grown for plowing down, for hay and for pasture. The usual custom is to broadcast the seed, or drill it in with the grain-drill, using all the hoes. This catch-crop fits in especially for land that is not in satisfactory condition for seeding to grass on account of weed seeds or growth, or on account of a naturally tenacious state of the soil that makes fitting for seeding difficult. Many farms have some such land, and nothing can put it into better condition for seeding to grass or wheat than cow-peas sown in drills, so that tillage can be given. Thin sod-land that should not grow a corn crop cannot be very satisfactorily broken for wheat and reseeded to grass. The catch of grass is not apt to be first-class, and there are wild grasses and weeds that remain unsubdued. When the land is broken in May, and planted with peas the first of June, there are time and opportunity to kill out all filth and make a fine seed-bed for fall sowing. In planting I prefer to use every fourth hoe of the grain-drill, stopping up all others. This gives rows thirty-two inches apart. Probably one peck of good seed to the acre is sufficient, but so many lots of cow-peas have a big percentage of damaged seeds that twelve to sixteen quarts is a safer amount to recommend. It is best to plant as soon as the ground permits after a rain, and the peas then come on quickly, ahead of grass or other weeds.

A two-horse cultivator, with three small hoes on each side, and with fenders, can be run very close to the plants as soon as they are up. The ground should not be ridged. Where the soil is heavy, or where there is filth to be killed out, I find that it pays to cultivate once a week for several weeks. Such midsummer tillage kills nearly every kind of foul stuff that gets a foothold in meadow-land. Soon the peas begin to shade the ground, and when fall comes the land is clean and the pea-stubble needs only the harrow and roller to fit it for seeding. The old sod has been rotted, the pea-roots have added nitrogen, the tillage has freed fertility, and moisture has risen from the subsoil. The peas are cut with a mower and made into hay, and whatever leaves are left on the surface add to the store of fertility. Cow-pea hay is very rich in protein, and while rather difficult to make, is worth much more than it costs. The land is put into prime condition for reseeding to grass or clover.

Land that is clean and that grows a crop of peas to be plowed under for a spring-planted crop may have the cow-peas broadcasted with good results; but when fall seeding to wheat or timothy is to follow a crop of peas grown for hay I find it best to drill the peas in rows wide enough apart for tillage. We are thus fitting the ground for seeding throughout the summer, and are getting a forage-crop that pays grandly for the labor put upon the land. As a cleansing and renovating crop cow-peas deserve a high rating.

CORN-STUBBLE FOR WHEAT

Some farmers grow their best wheat on corn-stubble land, while others in the same latitude find that such land gives them their poorest wheat. While the preparation of the ground for seeding has much to do with the chance of the crop, yet success with wheat after corn is determined very much by the character of the soil. Land that is rich in humus has the moisture and the fertility to produce good wheat after corn, while land deficient in humus cannot give the wheat-plants good fall growth. Rich, alluvial soils, or those highly manured or well clovered, very often need the corn to exhaust the supply of nitrogen, so that the wheat will not make too rank a growth of straw. The tillage of the corn gives a good seed-bed for wheat. On the other hand, there is a big acreage planted with corn that cannot be made to produce a good wheat crop by any method of preparing the ground. There is little organic matter in it to hold moisture, the soil-particles settle together after the cultivation of the corn ceases, and the corn-roots have used up about all of the available plant-food. No amount of stirring with a harrow or cultivator will provide the supplies of fertility and moisture that must be immediately available for wheat seeded after corn has been cut. It is this difference in soils that makes the wide difference in opinion among farmers regarding the desirability of seeding corn-land to wheat. Corn is a heavy user of fertility and water, and only very fertile land gives a full wheat yield after a corn crop.

EARLY PLOWING FOR WHEAT

We talk most about fertility, but moisture is really the great consideration in getting wheat started nicely in the fall. Comparatively little land is too poor to supply plant-food for a fair crop of wheat if the supply of moisture is just right all the time. We supply available fertility in fertilizers partly in order that a scant supply of water may do a lot of good. We supply humus partly in order that the moisture may remain present in the soil. Nothing is more important than soil-moisture. With this thought in mind we understand the necessity of having land plowed early, fined and firmed, so that water will rise from below, and so that the water from a light shower will not be carried off by the air passing freely through the soil. Late-plowed land may be settled by a packing rain just before seeding-time, so that it will give wheat good growth, but we do not know that such a rain is coming. Very often it does not do so. Plowing is needed to air the land, to change the particles about, and to cover the trash. When this has been done, the next thing is to get the soil-particles together closely enough to permit the rise of moisture and the retention of it. Where there are clods and cavities, air removes

the water. Early plowing, rolling and harrowing guard against the effects of deficient rainfall. With a given amount of fertility, the better the control of the moisture, the better the yield of crops.

DAVID.

SEED-TIME AND HARVEST

APPLES.—There are many farmers who place no value on the immature and windfall apples for feeding purposes. I have fed them to all kinds of stock except sheep—I have no sheep—and have never seen any but beneficial results from so doing. As the apples near maturity and ripen they are more valuable of course, as they are also more relished by the stock. I prefer to so use the inferior ripe apples to making them into cider, except such cider as is needed for making apple-butter and vinegar. I notice, though, that when we have good apple crops, and the cider-mills are kept busy, during the fall and winter there is more drunkenness and rowdiness than at other times. I am in nowise the guardian of the public morals, nor do I accept more than an individual's responsibility for my community's respectability and good behavior, but at the same time I do not think I am absolved from the discredit of local drunkenness if I keep a lot of barrels of hard cider around the place. I do not make vinegar commercially, as many of my friends do. If I did I would protect the cider with locks and bars.

I have a herd of young Jerseys running in a small orchard near my house, and they eat all the fallen apples, and I have never had a case of choking. They soon learn to handle the apples and train their ears for the falling fruit.

I think choking on apples comes from the animal that has not been accustomed to eating them having access to a quantity of the fruit and partaking of the apples too greedily.

A few apples are highly appreciated by the horse, and are very beneficial in their tonic effect. By allowing the animals to consume the windfalls and imperfect fruit instead of leaving them to decay where they fall destroys large numbers of embryo pests that would otherwise develop to annoy us.

THE YOUNG JERSEYS.—I have seven of these youngsters in my little orchard. In addition to the little grass and the fallen apples they find they get sweet skim-milk once a day, some corn-meal, and hay or soiling crops twice a day. They also get salt and water as desired. The milk is given them at noon, being brought every morning from the creamery. To calves three months old or older I prefer giving them the one daily feed, on account of having the milk thus more uniformly the same. Sweet skim-milk is a superb feed, sour skim-milk is a good feed, but having it sweet one time and sour the next, and the sour skim-milk in different stages of acidity, does not always produce the most satisfactory results.

Six of the Jerseys drink milk, but the seventh stands back while the others are drinking and licking and wishing for more, as if she were thinking "What fools these Jerseys be." She ignores the liquid first course, but is ready for the second one of corn-meal. I would like for her to drink milk, for she does not thrive quite as well as her companions, and I think a cow's greatest usefulness is established in the appetite of the calf, and builded up by the generosity and wisdom of her feeder.

CRIMSON CLOVER.—You do not know whether it will grow in your corn-fields and withstand your winter until you try it, and the present cheapness of the seed makes it easy to try this year. Sow in August, and cover well. If the harrow is run two inches deep it will not hurt, and may be much better than less deep covering, depending on the weather. It is a good thing, and should be encouraged. If you can get it to grow it will not only increase your land's fertility, but help save some that would wash next winter.

W. F. McSPANAN.

PLANT IMPROVEMENT

The great sugar-beet industry of the world owes its very existence to a discovery of Vilmorin. The original sugar-beet grown in France did not contain enough sugar for commerce. The amount of sugar could be easily determined in the beet, but in making the test the reproductive qualities of the plant were always destroyed. Vilmorin learned how to extract the pulp without destroying the plant, and by selection and cross-breeding he grew a plant upon which the great industry is now founded. We owe also to Vilmorin the present carrot, a vegetable which was nothing more than a thin, dry, hard, woody root, unfit for the stomach of a sheep or a cow. Year after year he sowed in a bed and carefully examined every root. By selecting seed from only the best plants for the new sowing he produced a carrot with more flesh and less wood. The horse-radish, the turnip, and indeed the potato-vine, were once plants with thin, dry, woody roots, without the least suggestion that they would ever develop into food for man or beast.—Success.

TILE-DRAIN OUTLETS

Among the most essential things in the construction of tile-ditches is a good outlet. A ditch may be dug and tiled all right, and do the work for which it was made all right for a short time, and then it begins to fail, and when investigation is made to find the cause, nine times out of ten it is found that the tiles have filled up for some distance. This is frequently caused by hogs and other stock. Now, this can be better prevented than remedied. Dig a well at the mouth five or six feet square and four to six feet deep, and wall it with two-inch lumber. Cut a hole for the tile, and let the tile project a few inches into the box (or well). Cut a space on the lower side of the box for the overflow. Now you have your tile where you can go any time and see if all is right. Nothing can enter the tile to choke it. Clean the mud, etc., out of the well as often as necessary to keep it below the tile.—Practical Farmer.

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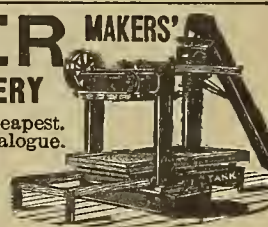


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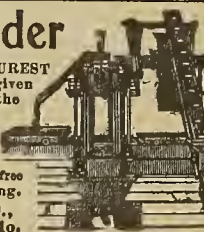
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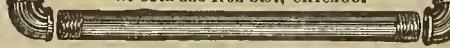
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RURAL HOMES

THE rush to the cities is over. Old farmers will no longer think of moving to town when they want to retire from active labors.

Young people will not find it necessary to move to town in order to be in good society.

Townpeople are going to the country to find quiet, peaceful homes far removed from the noise and confusion, the dust, the smoke, the clatter and the babbling of many tongues.

The wealthy business man seeks a rural home 'mid the beauties of Nature, and he uses skill and art and ingenuity to add to the beauty Nature has provided, and in a few years he has an ideal place for his family, where he may get rest and recreation as they are never found in the city.

The poor man finds a cozy cottage and a few acres of ground, where his children may enjoy fresh air and sunshine; where they may play in the sand, the brook or the meadow; where they may gather wild flowers and hunt for birds and butterflies; where they may have a beautiful garden, with all the luxuries it affords; where they may have milk and cream and butter right from their own cow in all their sweetness and purity; where they may grow their own poultry, and enjoy fried chicken as they never did before; where they may count eggs by the dozen, and not by the unit; where, in fact, they may have a delightful home, all their own, with none to hinder or molest, no rent to pay, no relentless landlord to fear.

The change has been coming for years. It has been noticeable about the larger cities for years. It is now to be found about the towns, and happy will those be who can first see the trend, and thus take the necessary steps to get choice locations before the movement becomes general.

What has wrought the change?

What influences have been at work to make rural homes more desirable?

Why is a home in the country any more desirable now than it was a score of years ago?

The introduction of telephones into the rural communities has removed forever the isolation, the dullness, the "out-of-the-world" feeling, and this heretofore city luxury is now one of the common things in many rural homes, where its company, its convenience, its actual necessity are even more highly appreciated than in the city.

The electric railroad is finding its way out into undeveloped communities, and cars are going hither and thither with passengers, express, freight, mail and baggage. What an evolution from the days when our fathers traversed the corduroy roads with ox-carts, and passengers were transported over the country in stage-coaches, and the United States mail was carried on horseback. Surely we live in a remarkable age, and man has all the comforts he needs.

No, scarcely all he needs, unless he has rural delivery of mails, which has perhaps done more than all else to relieve the monotony of country life. This delivery of mail at every country home is, in the opinion of the writer, the greatest boon ever given to rural people by the government. May its benefits continue to spread, and finally reach out into the most remote parts of the land, until every home gets its blessings. The city people have far less need of delivery than the country people, for in the city it is but a few steps to the post-office, while in the country it is miles.

Who will endure the noise and confusion of the city when he can have all its luxuries and reside in a quiet rural home, with thousands of pleasures never enjoyed in crowded cities. Let those who must remain in the city, but let the children at least learn something of the joys and delights of a home in the country.

JOHN L. SHAWVER.

NATURE'S BALANCE AND THE CONTROL OF PESTS

"A single swallow does not make a summer," nor does a normal quantity of insect, animal or bacterial life constitute a pest. Nearly all the so-called pests with which the farmer has to contend are to be found, if carefully sought, during those intervals when ordinary observers think them non-existent. It is only when specially favorable conditions or the absence of natural enemies allow the wonderful increase of which most forms of pest life are capable that they become a menace to agriculture. The incalculable millions of army-worms which appeared as if by magic a few years ago, devastating large areas in a number of states, were just the same, seemingly harmless worms, the larva of the moth "Leucania unipuncta," which had been passing through its life-changes in lesser numbers unnoticed by the eyes of unobserving humanity since its last disastrous outbreak.

The same is true in varying degrees of all the worms, caterpillars, weevils, bugs and vermin which occasionally seem to swarm into existence and sweep away the fruits of the husbandman's labors without let or hindrance. During the periods between such outbreaks the scattering representatives of former pests are so limited in number as to be practically harmless. As time passes there comes consecutive seasons when atmospheric and other conditions are specially favorable for their rapid reproduction. Then destruction is once more abroad in the land, and the fight is on, in which man has in the past been badly worsted, notwithstanding his vaunted acumen and power.

The question often arises why the increase of pests, especially the lower orders of insect and animal life, is so much more rapid as a country becomes more thickly settled and under cultivation. There is an evident and logical reason for such increase when consideration

In the Field

is given to the subject. When a country is in its primeval condition of forest, prairie or arid plain there will be found only such kinds and numbers of life existing as the conditions there found are capable of supporting. With the introduction and cultivation of new crops and vegetation there results an unbalancing of natural conditions, which allows some forms of life to make a greater increase than others, the result often becoming a menace or the entire destruction of certain crops.

As settlement, soil-reclamation and cultivation rapidly spread over the vast areas of our country there should have been a fostering, and even propagation, of birds and other forms of pest-destroyers instead of the wholesale extermination of many of man's best insect and animal friends, which has been allowed. Another factor which has had no small effect in increasing and distributing pests has been the wonderful increase in the rapidity and volume of trade and commercial transactions.

It is becoming more evident yearly that the most practical way of protection against pests is to restore the balance, which has been interfered with, between those forms of life which are favorable and injurious to agriculture. If every fruit orchard, garden and cultivated field were surrounded and pervaded with protective forms of bird and animal life in sufficient numbers the pest-problem would in a great measure be solved.

B. F. W. T.

A CHANGE OF METHODS

The farming methods of the eastern section of Virginia have gone through a radical change for the better within the last few years. Since the advantages and possibilities of some of the members of the leguminous family have come to be understood by the farmers in general, a great demand has been created for cow-peas, which demand promises to be greater in a sense than the supply for many years to come. The farmer, finding the great good the crop does in the way of improving his soil mechanically and in regard to plant-food, keeps the greater portion of his crop for his own use in many cases, and others wishing to sow for hay alone are compelled to pay a high price for the seed.

The peas and other plants, such as the soy-bean, can be put to as many uses that the people are being encouraged to look forward to an extremely high state of fertility for the better portions of the land in Tidewater, a condition which no commercial fertilizer could accomplish without enormous cost. What is commonly called bottomless land is now being less and less dreaded and shunned by buyers. The large quantities of humus which can be supplied quickly furnishes the best kind of water reservoir and plant-food holder that it is possible to have. A light loam can, when thus supplied and when properly tilled, be made the most profitable of soils and the most easily cultivated. It never bakes or cracks under these conditions, and the humus is a kind of sponge in its ability to hold water and fertility. It can easily be seen how such a soil has advantages over one with an impervious bottom, or hard-pan.

A few years ago our farmers depended almost entirely upon commercial fertilizer and barn-yard manure. The first was so costly and so unsuitable for light land that scores of our people were ruined financially, and have never been able to recover from the great cost which they were put to in supplying fertilizer to land with no humus, and which was soon washed far beyond the crops, or when too dry fired the crop, and thus produced a failure. Common commercial fertilizer with a poor base will not do in light land destitute of vegetable matter.

This very land, though, when supplied with the necessary bacteria will produce the rankest kind of growth of legumes, such as cow-peas and velvet beans. This is a demonstrated fact, and no theory. It has been proved by my own trials. Any one can reason that by the use of a little common sense the plant-food found in the rank pea crop can be turned into a corn crop or wheat crop, or whatever is liable to be the most profitable. If preferred, it can be pastured and allowed to rot on the ground before plowing, a method which has many advantages, with no danger of souring and injuring the land. These large quantities of humus-supplying substances will not be removed by leaching when properly plowed under, and will be ready for the next crop.

Allowing a heavy growth of vegetation to rot in the soil is in line with Nature's method of improving soil. Most soil when protected from sunshine becomes rich; indeed, when long covered, such as by a house, it becomes so rich as to be worthless for crops—a veritable niter-bed. But the few growths of protection afforded by the covering of the rank growth of the pea-vine or other plants have the most encouraging effect not only on the improvement of the soil in regard to plant-food added, but as to the softening influence it has on the ground—a quality which renders cultivation such a pleasure—working against clodding and baking, and causing sponginess, which is so necessary for the best airing of the soil and roots. The legumes, by drawing the nitrogen from the air—a substance so costly and so easily lost—are in my opinion the greatest gifts which the farmer has. Being easily grown, they are good for many uses, all of the highest importance to the

agriculturalist, be he a stock-raiser, grain-raiser or fruit-raiser.

The plants most commonly employed have such a large and deep root-surface that they range a large portion of the soil and gather large quantities of phosphoric acid and potash which many other plants could not reach.

This is a great prize to the farmer, next to the nitrogen-gathering abilities. In a few more years the writer expects the bare and worn-out fields so common in the South to be transformed into fertile and beautiful farms.

ALBERT D. WARNER.

ALFALFA

The correspondence of the Ohio Experiment Station indicates a large and increasing interest throughout the state in the culture of alfalfa. On the thin clays of the station farm the results of the experiments thus far made with this plant have not been encouraging; but there are large areas within the state where heavy sheets of drift clay are found, which when underdrained should produce this crop to advantage. Again, there are other regions of well-drained black soils and rich upland clays and bottom-lands which are naturally drained by underlying gravels; these offer conditions that have been found most favorable to alfalfa. Mr. Joseph E. Wing, of Champaign County, Ohio, whose land is of the kind last mentioned, has grown alfalfa on a large scale with excellent success, and he has furnished the following hints as to its culture:

"The best way to sow alfalfa is to plow the land deep in the spring or winter. Turn up a little new soil, harrow down, and sow beardless spring barley at the rate of two bushels to the acre. Sow fifteen pounds, or one peck, of alfalfa-seed at the same time. I usually roll the land well after sowing. This makes the alfalfa do better, but is sometimes hard on the barley. Alfalfa will come up through very firm soil and thrive better than when it is too loose. Let the barley ripen, and cut it for grain. Then when the alfalfa starts up a little clip it with the mower. Clip it close. It will start again, and after a month or so clip it again. Keep the stock off until next year. It is better to keep stock off for two years. Begin mowing the second year as soon as blossoms form. After the first crop is taken off it will mature another in exactly thirty days. Do not delay cutting this second crop. It will take about thirty-five days for the second crop to grow. Take it off promptly. Then in thirty-five to forty days there is the fourth crop. Take it off, or graze it.

"The third year is the best in the alfalfa's life, though it may not decline for ten years. Keep stock off it after frost; it is deadly then. Stock injures it greatly by treading on it after it is frozen. Do not pasture it close, either, in summer. It is the best pasture on earth for pigs, horses, cows, sheep and chickens. There is the same difficulty regarding bloat that there is in red clover. After frost there is perhaps more danger, yet the danger is slight if the stock, after being used to it, are never taken away from it until frost, and are then taken away for good.

"There is a point of great importance in the growth of alfalfa, and it is responsible for half the failures; poor soil is responsible for most of the rest. This point is the leaf-blight, or rust. If alfalfa is left standing too long there comes on the leaves a reddish rust. This rust causes the leaves to fall. Then the stem becomes woody, and the hay is of little value, and if it is not cut there will not be any growth of consequence. As soon, therefore, as this rust is seen, the alfalfa must be cut, and it must be cut no matter if it is a small growth. As soon as it is cut it will start to grow vigorously again. This rust will not form in less than about thirty days. That gives the alfalfa time to make a crop.

"Here is another point: During a dry time the growth may be short. Cut it just the same when the time comes. It will then be ready to take advantage of a rain and make the next crop. If you have not cut it, and the rain comes, it will not grow. The lesson is, Cut it on time, whether it is little or big."

Don't sow alfalfa on poor soil.

Don't sow alfalfa on wet soil.

Don't forget to clip it three times the first year.

Don't turn any stock on it until the next May.

Don't let alfalfa hay get dry before raking.

Don't fail to cut your hay in time. That means to be ready to cut by June 1st.

Don't ever let stock on your alfalfa meadows in cold weather.

Don't sow alfalfa-seed on unprepared soil, as you do clover.

If it fails with you, manure the land and try again.—Bulletin of the Ohio Experiment Station.

BEARLESS BROME-GRASS

The Northwest is rapidly becoming a source of supply for the seed of beardless brome-grass (*Bromus inermis*), although much is still imported. The seed is harvested when fully ripe, although care is taken to cut before the seed begins to shatter. Harvesting is done with a self-binder, set to cut high, and thus take in as little of the leaves as possible. When well dried the seed is threshed in a wheat-separator, using an oat-sieve and shutting off most of the wind.

The amount of seed secured an acre varies much, some growers reporting one hundred and fifty to six hundred pounds, while others give ten to three hundred pounds as the range. According to tests at the Minnesota Experiment Station it costs about ten to twelve cents a bushel to thresh the seed.—Yearbook of the Department of Agriculture.

Gardening

By T. GREINER

LATE PLANTING.—The planting-season in my garden is not yet over. I have yet ready for sowing the following seeds: Lettuce, spinach, winter radish, hardy onion (Barletta or Hardy White) for early green onions in spring, and kale for spring greens.

THE WHEEL-HOE.—A reader in Morgan County, Tennessee, writes me that he is using a wheel-hoe this season, and cannot speak too highly of it as a labor-saver. Though old, he can do more and better work with it than two or three young men with common garden-hoes. This is my experience during the best part of a lifetime!

POTATO-SCAB.—Our Tennessee friend also sends me "sample of his Irish potatoes." They are badly infested with scab. Growers who resort to any treatment for scab usually soak their seed-tubers for ninety minutes in a weak (1 to 1,000) solution of corrosive sublimate, or in some other powerful disinfectant. I usually expose my seed-tubers for a while to the light and to the nearly direct rays of the sun, in order to kill the scab-infection that may be on them, and rely for full exemption more on plenty of humic acid in the soil, generated by the turning under of green stuff, clover, weeds, etc., than to anything else. My treatment secures exceptionally clean potatoes.

POTATO-ROT.—A reader, G. A. H., address not given, asks how to save his Irish potatoes from rotting in the winter. The present prospect is for a potato crop such as we have not had for many years. I and others in this vicinity are now digging Early Ohios and other extra-early sorts of extraordinary size and yield, and late potatoes look unusually promising, too. But if the excessive rainfall continues, blight and rot are very likely to set in. I guard against this danger by frequent spraying with Bordeaux mixture, or "Pyrox" and "Boxal," which are ready-made Bordeaux mixtures combined with arsenites. In other words, to keep the potatoes from rotting during the winter we must first of all try to keep our vines in the field free from blight (the late blight), and then store potatoes while dry in a reasonably dry cellar. If the potatoes are damp when put into the cellar sprinkle them with dry lime or land-plaster.

THE SEASON.—"Brightest hopes dawn on darkest days," says "Ram's Horn." If that be true, the season must be full of bright hopes, as we are having an unusual number of very dark days. There are a lot of growers, too, with whom "hope" is about all they seem to get this year. And this is the hope for a better season next year. Possibly others of old sayings are upset by the season's excessive and abnormally continuous rainfall. "More rain, more rest," is one of them. With me it is "more rain, more work." If you don't believe it, come and see the magnificent growth of weeds all over my corn and other fields. Usually I cultivate for the chief purpose of saving moisture. This year I have moisture enough and to spare without cultivation, and I am hoping for a chance to cultivate my fields merely for the purpose of killing the weeds. I may have to accomplish this in many instances by means of the mower, scythe or sickle, or by hand-pulling, rather than by means of the cultivator and hoe. Unless I use all means at my command for killing weeds, weed-seeds will be scattered thickly far and near this year, and nine years of weeding will follow.

Fruit-Growing

By S. B. GREEN

POLLINATION OF FRUITS

THE facts with which we have to deal are briefly stated as follows: Many varieties of orchard fruits, especially plums, pears and apples, do not bear satisfactory crops when standing by themselves. Some do not bear at all.

The trees of such varieties require to be mixed with trees of other more or less closely related varieties, or they require to be grafted with a mixture of two or more varieties. This general condition is summed up by saying that such fruits are self-sterile, and the problem of self-sterility is the one with which we have chiefly to deal.

As soon as this matter began to be observed the fruit-growers and experimenters both found that a great many plum-blossoms are imperfect. In the majority of such blossoms the pistil, or female organ, from which the fruit itself directly develops, is defective; sometimes it is entirely wanting. It is evident that a blossom having no pistil cannot produce a plum, and it is at least fair to suppose that any defect in the pistil renders the chance of fruit-bearing much smaller. Considerable attention was given, therefore, eight or ten years ago to this part of the subject. It was found that in some cases all the blossoms on a tree were so deficient as to make fruitage impossible.


It will be sufficient for the present to say simply that it has been found that plums are very largely self-sterile, cases of self-fertility being altogether rare; that a majority of pears tested show more or less self-sterility, and that the same is true of apples. Perhaps one-fourth of the apples in common cultivation are totally self-sterile, another fourth are practically self-sterile and a third fourth need cross-pollination for the best results.

The remedy for all this unfruitfulness has already been named; namely, the mixing of varieties either by planting several together or by grafting two or more into one tree. This is such a simple and easy matter, and the risks of self-fertility are so great, that it seems an altogether unjustifiable practice now to plant large blocks of apples, pears or plums of any single variety. There are, indeed, to be found many orchards of solid blocks of certain varieties through the country which bear fairly well or even abundantly, but they are exceptions. Solid planting is always risky, and there are enough risks in the fruit business without taking any gratuitous ones.

The idea was prevalent that though Hawkeye might fertilize De Soto well enough it might still be of no value whatever in fertilizing Weaver or Miner, Ocheeda or Rolling-stone. At the present time it seems fairly certain that these proclivities cut no figure with practical orchardists. One variety will pollinate almost any other, provided the two are in flower at the same time.


The real work of scattering pollen, in ninety-nine cases out of a hundred is done by the bees, especially the wild or cultivated honey-bees. The gummy, mucilaginous pollen sticks to them, the hairy surface of the insect body being specially suitable for sticking purposes, and the bee passes from tree to tree laden all over with yellow fertilizing material. Cases have been called to my attention in which it seemed doubtful about the bees really having done the work, and I do not wish to assert that they are the only salvation for the self-sterile apple, pear and plum trees. Nevertheless their importance has been greatly underestimated hitherto, and I think we can afford to give them greater consideration in the future.—Extract from a paper by Prof. F. A. Waugh.

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CHEESE-MAKING—A NEGLECTED DAIRY INDUSTRY

THE manufacture of cheese in Indiana is confined to a single factory. The Columbia Cheese-Factory, owned and operated by Boyd & Drischel, is the only exclusive manufactory of cheese in the state. There is a creamery at Amboy and one at Lewisville, where cheese is made from the excess and waste products of the butter-factory, but the industry at Cambridge City is the only one that is devoted to the exclusive production of high-grade cheese.

In the census report Indiana is credited with only one cheese-factory with a total output of one hundred and thirty-two thousand pounds, valued at eleven thousand dollars.

The state of Wisconsin is shown to contain within her borders nearly two thousand cheese-factories, with their output valued at many millions of dollars. The total value of the dairy products of Indiana in 1899 was \$15,739,594, which is thirty-two per cent greater than that of the year 1889. Every department of the dairying industry shows a big gain except the manufacture of cheese, in which there is a remarkable lack of representation.

It is not because high-grade cheese cannot be produced in Indiana, for the Columbia Cheese-Factory took with its productions five first premiums at the Indiana State Fair; two second premiums at the Indiana State Fair; five first premiums at the Indiana State Dairy Association; one third premium at the Ohio State Dairy and Cheese Association, 1900, and scored second on points in 1902; two bronze medals and a pro rata cash premium at the Wisconsin Cheese-makers' Association in 1901. All of these premiums were taken in contests where the best cheese-factories in the United States made exhibits, and one of them, that at Wisconsin, was taken literally from the very camp of cheese-makers.

Mr. George W. Drischel, partner in the firm and manager of the business, expressed surprise that cheese-factories were not in operation all over Indiana; for no better natural advantages can be found than Indiana contains for dairying and cheese-making. The pasture and water afforded by the greater portion of the state are unexcelled anywhere, and the general excellence of dairy-cattle common over the state would seem to guarantee abundant supply of purest and richest milk. The present situation is in part explainable by the fact that in 1890 there were one hundred and four creameries in the state, and four years later there were but thirty-four, a falling off attributable to the swindling system that prevailed in almost every community, by which patrons were given no return for their support of the creameries, and in many instances actually robbed of the money they subscribed to establish the plant. The dairy business became all but extinct, and at the present there are only about one hundred creameries in the state.

The Columbia Cheese-Factory is also the pioneer cheese-factory in the state, and was the first dairy establishment in the state to adopt the Babcock system of testing milk. The Babcock test is a system by which watered or diluted milk can be detected. It is a wonderful scientific process, in which centrifugal force is made to cooperate with acids and chemicals in determining the per cent of butter-fat contained in the milk. It has since been generally adopted in all first-class creameries, and is used in the government experiment stations.

It is the belief of the manager of the Columbia Cheese-Factory that breeding alone will insure the production of standard milk, and that feeding will not do it. He has continually importuned his patrons to raise the standard of their dairy-cattle until he has prevailed in most instances. It is to the fact that the cows supplying the milk for his factory are graded high and cared for in a careful and systematic manner that he attributes the factory's success in producing premium cheese. The capacity of the factory is being steadily increased from year to year as the number of patrons who have standard milk to offer becomes greater. The spirit of improvement has become thoroughly established among the farmers in the vicinity of the factory, and it is believed that no better dairy-cattle exist than can be found about Cambridge City. This excellent condition can be traced directly to Mr. Drischel's efforts, who supplements his arguments by paying more money for the same grade of milk than is offered by any creamery in the county.

When the milk is received at the factory, about nine o'clock every morning, every can is subjected to the Babcock test, which requires but a few seconds. The milk is then run into a copper-lined vat which holds five thousand pounds. The temperature is brought up to eighty-four degrees by steam-pipes that are coiled in the vat. Rennet is stirred in the milk in the proportion of four ounces to one thousand pounds of milk. The contents of the vat are then thoroughly mixed and allowed to stand forty minutes, when the curd has been formed and the milk is "set." Specially formed knives are then used in cutting the curd into cubes, which serves to separate the curd and whey. The contents are then thoroughly mixed and heated to a temperature of ninety-four degrees, at which time a wooden rake is introduced and the curd again mixed as thoroughly as possible. The temperature is then raised to one hundred degrees, at which point the curd is cooked for one hour. The curd and whey can then be separated comparatively easy, and the curd is pushed to one end of the vat and the whey removed with a siphon. This whey is not wasted, but is returned to the patrons, who take it home to be used as food for pigs and calves. After the whey is removed the curd is placed by hand into the curd-sink, where it is beaten and mixed and all visible whey dipped off. It is then matted, or massed, and afterward placed in the cheddar. The curd-sink is rolled under the cheddar, which is only a chopper, or curd-mill. When the curd falls from the cheddar it is white with a golden blush, and fluffy as thistle-down. It is then salted with about two and one half pounds of salt to one thousand pounds of milk. After being thoroughly mixed the curd is placed in the presses, usually about thirty pounds to each press. These presses are run by hand-power on the crank-and-screw method. Pressure is put on very slowly and lightly at first. Then the cheese is taken out of the hoop, and turned—that is, the cheese is simply turned over so that the top is where the bottom was at first. This turning process has nothing to do with the curing or making of the cheese. It is only to keep it in better shape.

After the cheese is given form in the press it is bandaged with the ordinary cheese-cloth of commerce. This is a particular process, and only experts can place the bandage neatly without unsightly folds. A metal ring of the exact circumference of the cheese is provided, and a circular piece of the cloth laid in the bottom. Then a second piece, larger than the first, is placed so that the inside of the ring is covered higher than to where the cheese comes. The cheese is then carefully placed within the ring, when a second circular piece of cloth is laid on the top. The portion of the cloth that appears above the cheese in the ring is then laid smoothly over the cheese, and the whole removed to the press. The pressure is then increased, and the cheese turned twice more within a few hours. After the pressure has been on for fifteen hours the cheese is taken out and placed in the curing-room.

It is in the curing-room that the fate of the cheese may be determined for better or for worse. The curing-room is kept at about sixty degrees and at a moisture content of eighty-five per cent.

Cheese is a compound of nearly equal parts of fat, casein and water. A portion of this water is absorbed from the surface of the cheese by the air in the curing-room. Careful attention is given to this stage of the process of manufacture, for the flavor and texture may be entirely ruined by careless handling.

For years this factory has not been able to nearly meet the demand.

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Live Stock and Dairy

George W. Usher is the cheese-maker for the factory. The art of cheese-making is a regular trade, in which high wages are paid the most expert workmen.

All of the cream contained in the milk is allowed to go into the cheese manufactured here. No coloring-matter is used at any season of the year, and absolutely no foreign substances are permitted to enter into the composition of the cheese.

Cheese-making in Indiana is a subject that has interested the agricultural and dairy schools at Purdue for years, and much effort has been expended from time to time in the desire to influence persons to go into the business of manufacturing cheese on a large scale. The example of the Columbia Cheese-Factory is presented for imitation, and its success in a section not previously regarded as favorable for the production of dairy products is offered as proof conclusive of the correctness of the claims made by the schools.

C. M. GINTHER.

THE SUMMER SILO

As keepers of cows come to realize the importance of full feeding of the cows, and not subjecting them to periods of semi-starvation, as is now too generally the practice, the silo will grow more into universal use. Really, the business dairyman regards the summer feeding of ensilage quite as profitable as the winter use of it. To my mind it presents so many advantages over the system of soiling that it is bound to eventually supplant the use of soiling-crops.

A letter on my desk from a friend who built his first silo three years ago on my recommendation, and last year built another to feed from this summer, says, "Have opened my summer silo. All O.K."

That man can talk in short sentences and be jubilant, for he is master of the situation, and his cows shall rejoice with him.

This man has private customers for all the butter he makes, at very attractive prices, and the importance of maintaining a uniform supply of butter brings his dairying to a business basis. To this end he feeds his cows with the object of having them to depend upon. He has good cows, and they do not disappoint him.

Good Cows.—Another correspondent writes as follows: "There has been a great demand for good milk. I could sell more than I am producing."

This man gets six cents a quart for his milk, and does not bottle it.

Now, will the careful reader please note the moral? It is good cows.

The first man cannot keep any other kind, because he must have animals which it will pay him to feed liberally to keep him in butter for his exacting customers. The second man finds the ready sale for "good milk." There is always plenty of the other kind, but it does not come into hurtful competition with the good, rich, yellow, clean milk. Both these men have fine herds of pure-bred Jersey cows, that have been carefully selected, bred and fed for years, and no man could tell these correspondents of mine that a cow whose carcass would satisfy a butcher would be profitable in their herds.

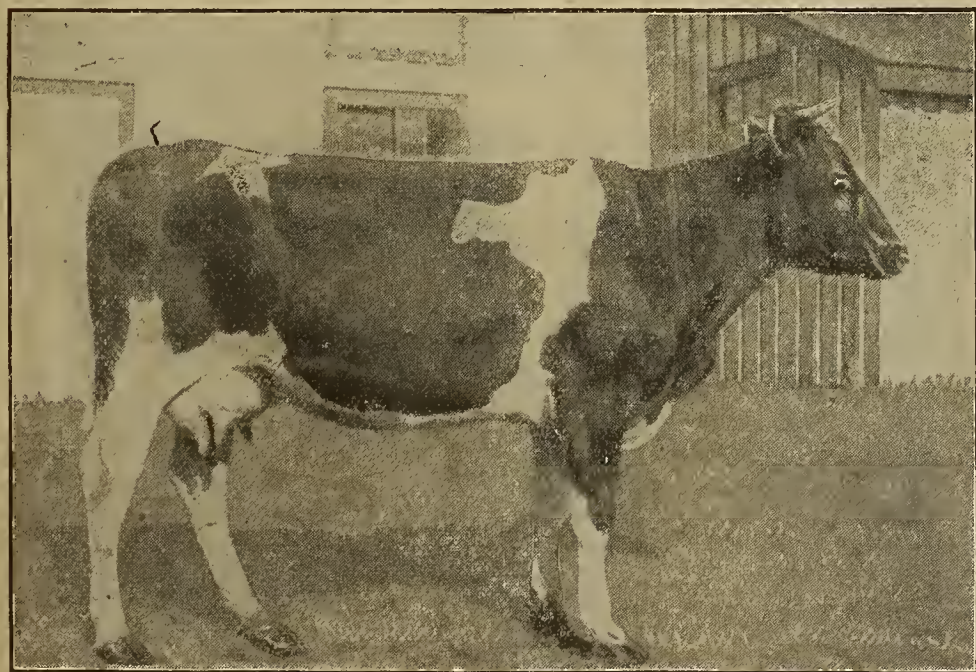
W. F. McSPANAN.

BUILDING A DAIRY-COW

A fuller comprehension of the fact that "like begets like" in breeding, whether it be corn or cattle, is inducing the most ambitious dairymen to strive to raise up and improve their own herds in place of promiscuous buying of unknown animals.

One does not have to travel far in any of the dairy centers to find good and practical results obtained by those dairymen who believe in breeding for a purpose. But there is another large class of mixed stockmen who combine meat-making and dairying, and their method of selection of the dairy-animal is doing great injury to the dairy interests of the country. Many of this latter-named class give their young stock the feeding and care best adapted for the production of beef; then, at the age for turning off, those least adapted for the block are kept for replenishing the dairy-herd. Such practice is partly right in principle. It is evident that an animal reared entirely with a view to the production of beef which refuses to develop beef characteristics is quite likely to be of the true dairy type, and would doubtless have made a most valuable dairy-animal had the early development been correctly carried out. The breeding for milk or the production of meat is of tremendous importance, but the proper rearing and handling from calfhood to producing age is of more importance in securing the money-maker for the dairy-herd.

The perfect specimen of dairy-cow is a most delicate piece of machinery, whose vitality and energy is all centered on the processes of converting extremely large quantities of fodder and roughage of comparatively small value into the largest possible amounts of valuable finished dairy products. The preparation and adjust-



DAISY OF ROCKWOOD
Holstein Cow Owned by the Ontario Agricultural College

ment of all this powerful, yet easily deranged, machinery cannot be built up and perfected in a few weeks or months, but must be secured by intelligent, adaptive breeding, feeding and handling from the start.

The digestive and assimilative organs capable of converting sufficient food-stuffs into six thousand or seven thousand pounds of milk, that will produce three hundred to five hundred pounds of butter-fat, or its equivalent, annually, must be developed with the same care and intelligence that go to the production of the engine and motor, in the mechanical world.

B. F. W. T.

Have you counted the dots? \$1,500.00 in cash will be given to the winners. The contest closes this month of August. See page 9. No one has a better show than you.

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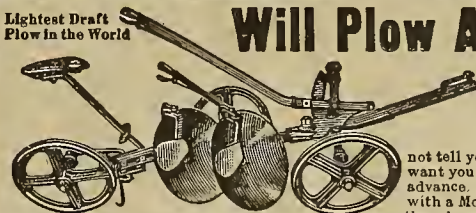
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THE PROFITABLE HENS

IF YOU have noticed a particular hen during the season that seemed to excel the others in laying, do not sell her because she is molting or has stopped work for a while, but keep her for another year. You may not be able to breed as good pullets from her as she is herself, but leaving the value of her offspring out altogether, it is always safe to retain a hen that has shown herself profitable. Hens often last four or five years, and it is time to dispose of a good hen only when you notice that she is beginning to fail.

HOW MUCH PROFIT

Most of the experienced poultrymen estimate that each hen will afford a profit of one dollar a year. This may seem small to some, but it means after the interest on capital, food and other cash expenses are paid. It is really a large profit, as most of the hens are not valued at more than half that sum each, and with a flock of thirty hens it represents the interest of five hundred dollars at six per cent. When we take into consideration the fact that on most farms the actual capital invested in poultry is very small, the profit from the hens is usually quite large.

GERMS OF DISEASE

When roup has had a hold on a farm the germs remain in the soil for months. The length of time, however, depends on the kind of roup, as the term is used to apply to consumption, diphtheria and scrofula. The entire premises should be disinfected two or three times, drenching the houses, floors, roofs, ground, etc., with a mixture made by dissolving one pound each of copperas and bluestone (sulphate of copper) in ten gallons of hot water, then adding one gill of sulphuric acid. Kill all the birds, and get others that are known to be healthy. The labor of handling sick birds is too costly when the whole flock is attacked.

VARIETY FOR YOUNG POULTRY

There is scarcely a vegetable that goes upon the farmer's table that may not be used to advantage in feeding chicks, both young and all. Thick sour milk may be used for adults, while curds of milk make an excellent food for young poultry, but cannot be used too often. Green onion-tops and garlic are much relished by both chickens and turkeys, and will be found conducive to the health and growth of all kinds of young poultry. A variety of food is quite essential to the growth and highest state of health. Fowls are feeding from morning to night when provided with a good range, and this is a very essential feature. A constant addition to the supply of food in the crop appears to be one of the laws of good digestion.

THE OBSERVATORY

Absorb the sunshine of to-day. Tomorrow gloomy clouds may lower.

The schools of a community are an accurate reflection of the mental status of that place.

It is tenfold easier to speak under provocation than to keep silent. It is a thousandfold pleasanter living if silence has been kept.

Many people mistake pettish ill-humor for honest plainness of speech. It is observed that plain-spoken people seldom speak pleasant things plainly, but only disagreeable ones.

It is far easier to keep undesirable members out of the grange than to freeze them out when once they are in. A fact to be remembered in organizing a grange is that "oil and water will not mix."

Ohio State Grange Reunion, September 3d and 4th. Those who have attended will never again miss it. Those who have not been present have two happy, profitable, eye-opening days before them.

Field-meetings, or picnics, are the order of the day. Get a good speaker, advertise widely, provide comforts for distant guests, leave your aches, pains and ills at home, and don't forget a well-filled dinner-basket. Fill up on grange enthusiasm, and be not surprised that new members gladly come to you.

GRANGE GROWTH

Secretary Trimble's semi-annual report shows that from October 1, 1901, to June 30, 1902, both inclusive, two hundred and twenty-six granges have been organized and reorganized. In number of granges organized, Michigan leads with ninety-one. Then Maine falls in with twenty-nine; Ohio, twenty-six; Oregon, twenty; Pennsylvania, seventeen.

In activity it is hard to say which one of the above-named states is foremost. Some are maintaining a steady growth, others are just awakening to the possibilities within the grange. Certain it is that not for many years have so many inquiries been made concerning grange organization.

Field-meetings and grange picnics are increasing in number, and the demand for lecturers is constant.

The concentration of vast industries; the increasing power of organized labor; the recent hard-won battles of the organized farmers; the battles agriculture must yet win if it is to maintain a commanding position; the general diffusion of intelligence; the growing recognition of the fact that the faults of our neighbors which we know do not outweigh those of him we do not know, and the consequent charitable thought; the recognition papers, magazines and leaders in thought, action, politics, are bestowing on the grange; the excellent, careful leadership of the majority of the officers, no less than the loyalty of the members the country over—all have contributed to this end. It is not phenomenal. It is simply the inevitable outcome of an organization conducted on conservative principles, that ministers to the social, financial and educational needs of a class of people.

Figures are not at hand, but it is probable that as many new members have gone into old, well-established granges as have come into the newly organized and reorganized ones.

Poultry-Raising

By P. H. JACOBS

SCABBY LEGS

When a fowl has scabby legs the greatest precautions must be taken. An ointment should be used early and often, or else the birds should be killed, as the disease is contagious. Do not allow a bird with scabby legs in the flock, as it is a filthy, disagreeable object. When the disease first appears an easy way to cure it is to rub on the legs a grease composed of one part of kerosene to one part of lard. This will in nearly every case entirely clear off the scabs. When the legs become thickly covered, however, the first duty is to scrape away as much of the scale as possible; then wash the legs, and dry well, after which grease the legs from toes to thigh with an ointment composed of one teaspoonful of carbolic acid, one gill of lard and one tablespoonful of coal-oil. The parasite will succumb to the ointment, and the scales will gradually fall off.

THE PLYMOUTH ROCKS

An excellent breed for many purposes that is used in this country, and which is especially adapted to our American climate, markets, etc., is generally acknowledged to be the Plymouth Rock. The Plymouth Rocks are well adapted to the requirements of the farmer, and are considered by some as superior for marketing. They are superior to some breeds in many ways when maintaining their purity as a breed. They are excellent layers, are considered fine sitters, are good mothers, and at the same time are easily confined and kept under control. They also endure cold weather well, are entirely self-reliant when on the farm, roaming around, dependent upon their own exertions, contented and happy when retained in small inclosures. One who has a good yard of Plymouth Rocks has a beautiful and ornamental flock of compact birds, excellent for the table or as layers. There are many other meritorious breeds, but for size and profit this breed attracts much attention on the score of its merits.

FEEDING ASIATICS

It is quite an art to properly feed a Brahma or Cochinchina. As soon as they are matured they fatten so easily that unless great care is used they soon become sluggish, and cease to lay. When such is the case it is best to give them nothing but green food, allowing a meal of lean meat and oats at night, but no corn. The chicks of these breeds do not readily fatten, as they grow rapidly with heavy feeding, but as soon as they

are matured, and have ceased to grow, they readily convert nearly all their food into flesh. If so fed that they can be kept in only moderate condition they will lay well at all seasons, while for market they may be quickly fattened at all times. Small breeds require more range. It requires nice discernment and skill to feed

fowls when they are yarded. What may be supposed a good quality for the Asiatics—sluggishness—is sometimes an obstacle to success, for they do not take sufficient exercise to work off the surplus fat, which is detrimental to health and productiveness. Any breed will endure confinement if the hens are kept at work. The mistake usually made is to confine the hens, feed them well (often too well), and look for eggs. The true way is to feed them in such a manner as to compel them to scratch, the same as if they were running on a range, and it will not matter then how large may be the size of the yards. A small quantity of warm, soft feed given early in the morning in winter will invigorate them, but they should have only about half a meal. Then scatter grains about for them to hunt and pick up. If they refuse to do this it shows that you feed too much. Starve them to it, if necessary, and it will be all the better for them. At night, however, give them all the whole grain they can eat.

POULTRY CHAT OVER THE FRONT GATE

"An egg is an egg," was the oracular declaration of one of my customers, leaning over my front gate to chat with the Doctor's wife, who had come in for her daily half-dozen. "I can't see a mite of difference in 'em, unless, of course, they're too stale. It's all nonsense to say one egg tastes better than another."

"I am very particular about my eggs," said the Doctor's wife; "and the Doctor—well, you should hear him sputter if a 'store' egg is cooked for him. He can tell it in a minute. I buy my eggs of Mrs. P. because they are always good. We have them soft-boiled for six breakfasts a week."

"I boil mine twenty minutes," said the other lady. "I don't like eggs, anyway, and a soft-boiled one I couldn't touch. I generally scramble 'em, and put in lots of seasoning, then they don't taste as if you were eating eggs."

"There we differ," laughed the Doctor's wife. "We like eggs, and we want our eggs to taste like eggs, and good ones at that. I've had fishy eggs, oniony eggs and indescribable-tasting eggs, yet they were newly laid, I knew."

"Give hens clean, sweet food and you'll have eggs that are eggs," was my comment. "My hens have access only to food and water that are cleaner than many people use, hence my fine-flavored hen-fruit."—A. L. P., in Farm Journal.

POSTAL SAVINGS-BANKS

The broad, constructive statesmanship of the leaders of the grange led them long ago to ask of Congress an enabling act for the establishment of postal savings-banks. Public sentiment as it has become educated has steadily increased in its favor. It is indeed

strange that Congress has not been quick to respond to a demand at once so meritorious and popular. Evidently agitation and work must still go on through the grange and kindred organizations.

Vast benefits are to be derived by teaching thrift and economy to our people. We are the most wasteful and extravagant people on earth. Give a child a penny and he grasps it tightly in his tiny hand and hurries off to spend it. If he is a country child, he teases continually to go to town to get a stick of candy or a toy. Old bottles, rubbers and rags are eagerly pounced upon to get a penny to spend. The mania for spending riots in the veins of the youth. Not until he has reached middle age does he see and regret the lavishness of earlier years. To be sure, there are now and then despicable misers who disgust, but the spendthrifts are the rule. The incentive to save is not strong enough with the majority to overcome their imaginary wants. Did the spending satisfy any real need or create noble needs, then would there be some excuse. But it does not.

A thrifty, economical people are usually happy, intelligent and well supplied with the comforts and luxuries of life. The man with a small bank-account is not apt to commit lawless deeds or strike on small provocation, and thus deplete the careful economies of years. Rather will he hedge his savings with precautionary devices. The wisdom that compels him to save enables him to see that it is cheaper to educate the hand, heart and head of the youth of the community than to maintain him in a charitable or penal institution. Precautionary measures are always cheaper than corrective.

Let postal savings-banks be established at our little country post-offices, and millions of dollars that are annually squandered to no purpose will be deposited. Small farmers and wage-earners who would never think of opening a bank-account will be induced to do so; the penny or nickel of the school-child that would be thoughtlessly spent for candy and toys will under the spur of popularity be put away. And some day, when a tactful and sympathetic teacher arouses the ambition of the young man and maiden for a better education, they will turn with confident reliance to the accumulations of childhood. The best foundation for a useful and happy life is the correct notion of the uses and values of money.

"How to live? that is the essential question for us. Not how to live in the mere material sense only, but in the widest sense. The general problem which comprehends every special problem is the right ruling of conduct in all directions under all circumstances—in what way to treat the body; in what way to treat the mind; in what way to manage our affairs; in what way to bring up a family; in what way to behave as a citizen; in what way to utilize all those sources of happiness which Nature supplies; how to use all our faculties to the greatest advantage of ourselves and others; how to live completely. And this being the great thing needful for us to learn is by consequence the great thing which education has to teach. To prepare us for complete living is the function which education has to discharge; and the only rational mode of judging of any educational course is to judge in what degree it discharges such function."—Herbert Spencer.

Is your count in? The Grand Prize of \$500.00 cash, and 206 other cash prizes, will be awarded at the end of this month. See page 9.

The Grange

By MRS. MARY E. LEE

Your Last Opportunity to Make \$500.00

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The

Dot

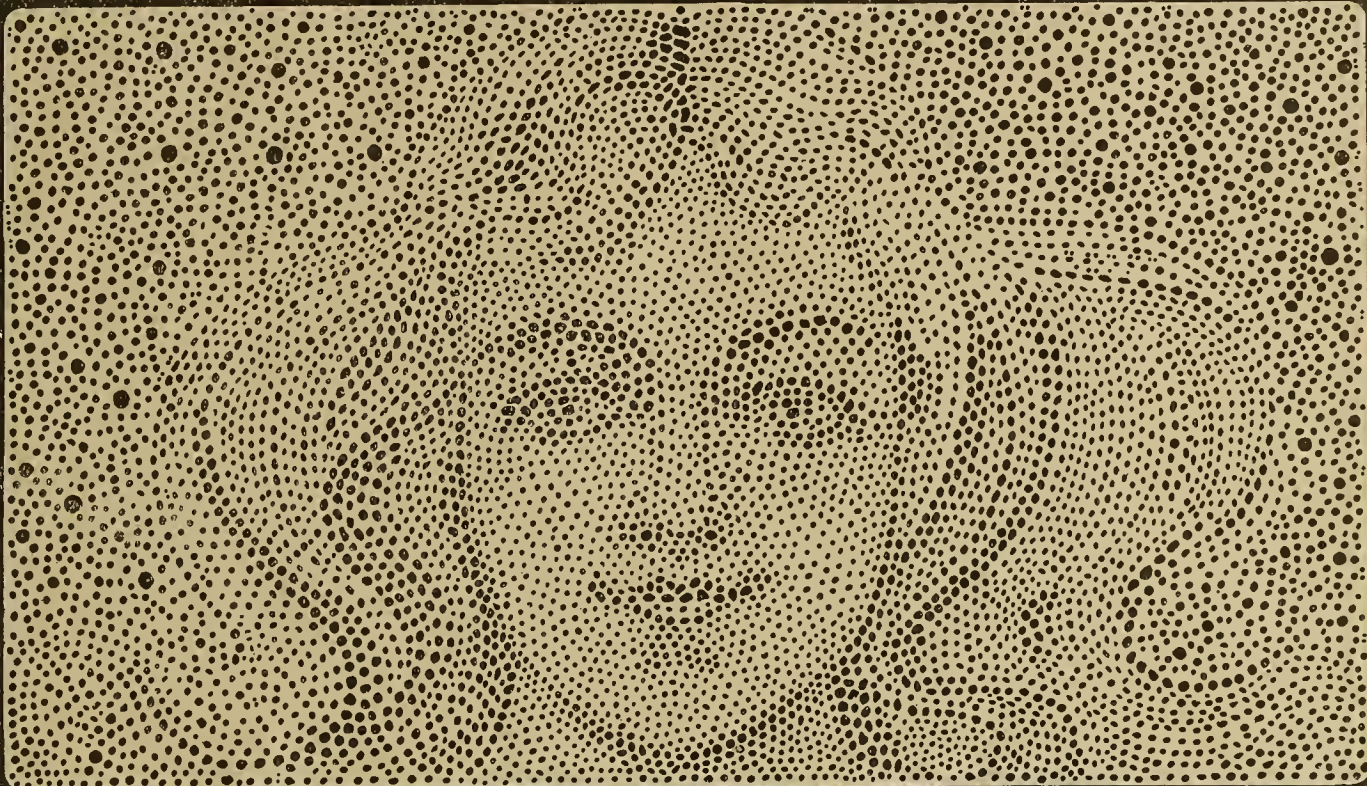
Contest

Closes

this

Month—

August



207

Cash

Prizes

Aggre-

gating

\$1500.00

Cash

DON'T

DELAY

FIFTEEN HUNDRED DOLLARS CASH PRIZES WILL BE GIVEN FOR THE CORRECT OR

NEAREST CORRECT COUNTS OF THE DOTS IN THE ABOVE DIAGRAM

Every one sending 35 cents, the regular clubbing price, for one year's subscription to the

Farm and Fireside will be allowed ONE count of the dots free.

Three yearly subscriptions and *three* counts (either for yourself or others) for One Dollar.

REGULAR SUBSCRIBERS will have their time extended for a number of years equal to the full amount of money they send in.

You may accept any offer we make in this issue including a subscription to the Farm and Fireside and send one count with it.

- FIRST PRIZE - \$500.00 Cash
- Second Prize - - - \$200.00 Cash
- Third Prize - - - \$100.00 Cash
- 4 Prizes, \$25.00 each \$100.00 Cash
- 10 Prizes, \$10.00 each \$100.00 Cash
- 40 Prizes, \$5.00 each \$200.00 Cash
- 150 Prizes, \$2.00 each \$300.00 Cash
- Total \$1,500.00 Cash

REMEMBER, THE CONTEST

ENDS THIS MONTH—AUGUST

We want YOU to count the dots and enter

the list of contestants for the cash prizes.

THE MONEY IS READY

SEND YOUR COUNT NOW

Fortune Raps on Every Man's Door but Once

THIS IS YOUR OPPORTUNITY. NOW IS THE TIME FOR YOU TO COUNT THE

DOTS. YOU MAY BE ONE OF THE WINNERS.

The count is absolutely free. Every cent paid is applied on your subscription.

You can count as many times as you want. Send 35 cents with each count.

Each count will then be registered, and you will receive a full year's subscription

to the FARM AND FIRESIDE for every 35 cents you send in.

This magnificent offer is made for the exclusive benefit of the readers of the

FARM AND FIRESIDE. The contest was gotten up to test the skill of our readers,

and to give them profitable amusement and entertainment.

The more counts you send in the greater your chance of winning one of the

big cash prizes. Count the dots half a dozen times, and you will be almost sure

to send in the correct answer.

This is a splendid opportunity to win a great cash prize as the reward of only

a little perseverance and care. The exact number of the dots can be counted by

any one at the price of a little time.

The prizes are so great that you have a big chance of winning hundreds of

dollars for the short time it takes to count the dots.

If two or more give the correct count the grand prize will be divided, and

the same method will be adopted in awarding the other prizes.

Even if your answer is not correct you may get a prize, because the money

goes to those who send in the correct or nearest correct counts. We do not

care who wins the prizes. They are yours if you have the skill and perseverance.

No one employed by or connected in any way with the FARM AND FIRESIDE,

nor any resident of Springfield, Ohio, or its suburbs, will be allowed to enter

the contest.

If possible, use the subscription blank printed on this page; or, if desired, a

sheet of paper may be used the same size as the blank printed on this page.

Use This Coupon, if Possible, or Cut a Piece of Paper Same Size as This Coupon

Cut along this line

FARM AND FIRESIDE

Springfield, Ohio

Inclosed find (Amount of money)

to pay for subscription

(State whether one or three years)

to the Farm and Fireside.

Name

Post-office


County State

Are you a new or old subscriber?

(Write "New" or "Old")

My count (or counts) of the dots is:

ADDRESS FARM AND FIRESIDE, SPRINGFIELD, OHIO



After Consultation

When you've carefully weighed the claims of all kalsomines and wall-finishes, and you've placed them side by side with the proven claims we make for

Moore's Muresco

you will inevitably come to the decision to use Muresco.

There is nothing that any wall-finish can do that Moore's Muresco cannot do better. It makes artistic walls and ceilings, producing a very pleasing satin-like finish. Doesn't crack, peel or rub off. It is fire-proof, and far cleaner, more healthful and more durable than wall-paper. Comes in white and fourteen tints, allowing you any color scheme you desire.

If not at your dealer's, send direct to us. Helpful hints, instructions, color-card free.

BENJAMIN MOORE & CO.
476 Water Street, Brooklyn, N. Y.



MEND IT

Why seek a tinsmith every time you have a little leak in your pans, boilers, tea kettles or pots, when you can mend them yourself in a moment's time with a match and a 25 cent spool of ST. JOHN'S TIN MENDER.

Enough for 100 mends. Holes from the size of a pin point to one-half inch in diameter. Makes the vessel stronger than before the leak. The greatest household convenience ever invented. Sent anywhere for 25c prepaid. Money refunded if not satisfactory.

ORIGINAL MFG. CO., 54 Adams St., CHICAGO, ILL.
Agents Wanted. The greatest seller on the market.



Rider Agents Wanted

In each town, to help us sell overstock of high grade bicycles at half factory cost.

New 1902 Models.

- "Bellise," complete \$8.75
- "Cossack," Guaranteed High Grade \$9.75
- "Siberian," a Beauty \$10.75
- "Neudorf," Road Racer \$11.75

No finer bicycle at any price.

Any other make or model you want at one-third retail price.

Choice of M. & W. or Record tires and best equipment on all our bicycles. Strongest guarantee.

We **SHIP ON APPROVAL** C. O. D. to any one without a cent deposit & allow 10 DAYS FREE TRIAL before purchase is binding.

500 good 2nd-hand wheels \$3 to \$8.

DO NOT BUY a bicycle until you have seen our free catalog with large photographic engravings and full descriptions.

MEAD CYCLE CO., Dept. 82 W Chicago.



FAT

How to reduce it

Mr. Hugo Horn, 344 E. 65th St., New York City, writes:

"I reduced my weight 40 lbs. three years ago, and I have not gained an ounce since." Fully vegetable, and harmless as water. Any one can make it at home at little expense. No starving. No sickness. We will mail a box of it and full particulars in a plain sealed package for 5 cents for postage, etc.

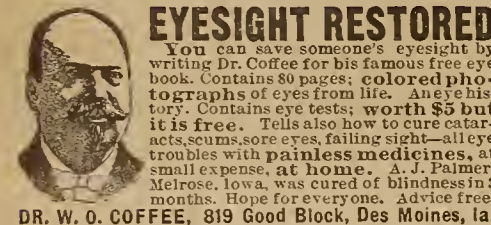
Hall Chemical Co., Dept. B, St. Louis, Mo.



MADE \$105 THE FIRST MONTH

writes FRED. BLODGETT, of N. Y. J. L. BARRICK, of La., writes: "Am making \$3.00 to \$5.00 every day I work." MRS. L. M. ANDERSON, of Iowa, writes: "I made \$3.50 to \$6.50 a day." Hundreds doing likewise. So can you. \$5.00 to \$10.00 daily made plating jewelry, tableware, bicycles, metal goods with gold, silver, nickel, etc. Enormous demand. We teach you **FREE**. Write—offer free.

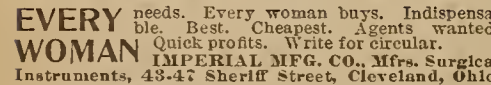
G. GRAY & CO., Plating Works, A Miami Bldg., Cincinnati, O.



EYESIGHT RESTORED

You can save someone's eyesight by writing Dr. Coffee for his famous free eye book. Contains 80 pages; colored photographs of eyes from life. Aneyehistory. Contains eye tests; worth \$5 but it is free. Tells also how to cure cataracts, scums, sore eyes, failing sight—all eye troubles with **painless medicines**, at small expense, at home. A. J. Palmer, Melrose, Iowa, was cured of blindness in 3 months. Hope for everyone. Advice free.

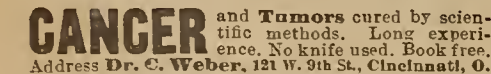
DR. W. O. COFFEE, 819 Good Block, Des Moines, Ia.



EVERY WOMAN

needs. Every woman buys. Indispensable. Best. Cheapest. Agents wanted. Quick profits. Write for circular.

IMPERIAL MFG. CO., Mfrs. Surgical Instruments, 48-47 Sheriff Street, Cleveland, Ohio.



CANCER

and Tumors cured by scientific methods. Long experience. No knife used. Book free.

Address **Dr. C. Weber,** 121 W. 9th St., Cincinnati, O.



BED WETTING CURED.

Box free.

ZEMTO CO., R. 62, 1089-12th St., Milwaukee, Wis.



BED-WETTING CURED.

Sample FREE.

Dr. F. E. May, Bloomington, Ill.

If afflicted with weak eyes, use **Thompson's Eye Water**

Around the Fireside

BATTLES

Nay, not for fame, but for the right—
To make this fair world fairer still;
Or lordly lily of a night,
Or sun-topped tower of a hill,
Or high or low, or near or far,
Or dull or keen, or bright or dim,
Or blade of grass, or brightest star—
All, all are but the same to him.

Oh, pity of the strife for place!
Oh, pity of the strife for power!
How scarred, how marred a mountain's face!
How fair the fair face of a flower!
The blade of grass beneath your feet,
The bravest sword—aye, braver far—
To do and die in mute defeat,
Thou bravest conqueror of war!

When I am dead say this—but this:
He grasped at no man's blade or shield.
Or banner bore, but helmetless,
Alone, unknown, he held the field.
He held the field with saber drawn,
Where God had sent him in the fight;
He held the field, fought on and on,
And so fell fighting for the right!

—Joaquin Miller.

A GREAT NAVAL WAR GAME

THE waters of the Caribbean will float next winter the largest fleet of American warships which has been assembled anywhere since the blockade of Santiago.

The ships of the North Atlantic Squadron will assemble at Hampton Roads about the middle of November, and those of the South Atlantic Squadron, at Bahia, Brazil, three weeks later. Meanwhile Admiral Crowninshield, will gather the vessels of the European Squadron at Gibraltar, and stopping to coal them at the Cape Verde Islands, will sail across the Atlantic.

The three squadrons, with all available torpedo-boats and destroyers, will mobilize at Culebra Island, near Porto Rico, or at Guantanamo, Cuba, about the first of January. There, for two months, they will be organized and drilled. Six or seven first-class battle-ships, twice as many cruisers, and gunboats and smaller vessels, bringing the total up to fifty or more, will compose the great fleet assembled for this impressive game of war.

These manœuvres will encourage a healthy rivalry between the divisions and gun-crews. The "man behind the gun" will be drilled in the art of loading it quickly and pointing it accurately, and new appliances for improving speed in loading will be tested.

Besides this, the movements of the fleet will be specially directed to the problem of the defense of Porto Rico and the approaches to the proposed isthmian canal. The war game is not wholly play; it is a preparation for possible emergencies incident to the enlarged responsibilities of the United States.—Youth's Companion.

MR. WU WILL WRITE BOOKS

It is not expected that Minister Wu will leave Washington for his new post in China for some weeks. In the first place, his successor, Liang Chen Tung, is now attached to the Chinese special embassy to the coronation of King Edward VII., headed by Prince Chun, a son of Prince Ching, who is the head of the Chinese board of foreign affairs, and the embassy is expected to attend the coronation ceremony in August. Then, too, Minister Wu must have time in which to close his affairs in Washington.

Prince Chun, it is learned here, is to return to China by way of the United States, and the officials of the Chinese legation are not prepared to say whether the new minister will take up his duties at the legation upon his arrival in the United States or go to China with Prince Chun and return later to Washington.

Officials personally acquainted with the new minister describe him as a man of imposing stature, being over six feet in height, and slightly inclined to stoutness. He speaks English fluently.

Minister Wu, in speaking of his return to China, said that the first and most urgent need of China is a financial readjustment, which will relieve the country of the great and increasing burden caused by the payment of foreign obligations in high-priced gold, while silver is the only current money. China also needs three things—education, railroads and newspapers. More young Chinese students should study in the United States and Europe, and there should be a system of popular education. Railroads are a strong force in educating the people by bringing them into closer contact, and high-class newspapers are another form of education. The minister did not indicate how the improvements he desired are to be brought about, but called attention to the fact that he himself was an advocate of the first railway to be built in China, and indicated that he would favor extensions now. The minister intends to write two books—one on America, for publication here, and the other on his observations outside of China, for circulation in that country. This latter work will be intended to spread Mr. Wu's ideas among the people of his own country. However, as he has before him at least two years' work in the codification of the foreign laws, the minister does not know when he can start his books. "We have ambition to do many things," he said, "but life is very short, and there is not time for doing many things."—Washington Post.

ROCK-SALT FOR CURRENCY

The currency of Abyssinia is somewhat varied, to judge by an account given of it by Count Gleichen in his story of the mission to Menelik, and reprinted by "Popular Science Monthly."

For standard money the people of Abyssinia use the Maria Theresa 1780 dollars, but for small change a very different coin is resorted to. This is no other than a bar of hard, crystallized salt, about ten inches long and two and one half inches broad and thick, slightly tapering toward the end. Five of these bars go for a dollar at the capital.

People are very particular about the standard of fineness of the currency. If it does not ring like metal when struck with the finger-nail, or if it is cracked or chipped, they will not take it. It is a token of affection when friends meet to give each other a lick of their respective amolis, and in this the value of the bar is decreased.—The Scientific American.

BABYLONIA

In the new edition of the Encyclopedia Britannica Professor Sayce gives a most interesting account of Babylonia and Assyria from the foundation of Eridu, which he refers to 6000 B.C. "The alluvial plain of Babylonia," he tells us, "after its reclamation from swamp and jungle, was called by the Sumerians the Edin, or 'plain,' a word which was borrowed by Semitic Babylonians under the form of Edinnu, the Eden of Genesis ii. 8. A Sumerian hymn describes a magical tree—the tree of life—which 'grew in Eridu,' in 'the center of the earth,' where the god Ea walks in his garden, forbidden to man, and Tammuz dwells beneath its shade, while the Tigris and Euphrates flow on either side. In this description it is difficult not to see a parallel to that of the biblical Garden of Eden." We are apt to think of the rulers of states in these ancient times as essentially soldiers, and it is a side indication of the civilization which had already been attained that Nabonidos was more of an antiquary than a politician. He spent much of his time in excavating for the monuments of his ancestors and endeavoring to fix their dates. "Thus he states that Naram-Sin, the son of Sargon, lived three thousand two hundred years before his (Nabonidos') time."

THE RUSTLER IN ALL HIS GLORY

Jim was a figure worth noting those days. His appearance received as much consideration and preparation as that of many a man of fashion in the great outside world. His clothing and equipment were chosen with extreme care, and were of their kinds the best.

He wore a large felt sombrero with a handsome silver-braid band; light flannel shirt with a brilliant red silk handkerchief knotted sailor-fashion on top of the broad, low collar; dark cassimere trousers "foxed" with buckskin around the waist-band and the bottom of the legs, and with diamonds of buckskin on each knee; boots of the finest calfskin, having exaggerated French heels with which to grip the stirrups firmly; fine soft buckskin gloves.

About his waist he wore a wide leather belt filled with cartridges, and for firearms he carried two silver-plated, ivory-handled Colt's six-shooter revolvers. One of these was worn in his left hip-pocket, and the other in a fine Russia-leather scabbard, stamped and cut with a pattern and having a leather tassel on the end. This scabbard he wore on his right hip, where in a wink the revolver could be drawn and ready for action.

Jim's spurs were of the long, Spanish variety, with great rowels, and decorated with silver conchas. Over the stirrups were long, handsomely stamped tapaderos—loose leather casings for the feet, protecting them in cold weather, and, with their whip-like, rawhide appendages, useful at any time for punishing a refractory horse.

He rode a "full rig" California saddle, with the pommel covered with silver and the corners of the skirts also tipped with the same metal. The saddle was ornately stamped and made to Jim's own order, with an elaborate J on each of the stirrup-leathers. A Brussels-carpet saddle-blanket bound with leather rested on the horse's back, and on top of that a fine Navajo blanket. His horse's head-stall was made of plaited rawhide, with large silver conchas on each side of the brow-band. The bit was a Chilean ring chain, made of malleable iron, silver-plated and handsomely engraved. On either side of the bit-bar was also a great silver concha.

The bridle-reins were sixteen strands of new rawhide braided firmly. Over the horse's head, on the neck, the reins were joined into one piece four or five feet in length. This long piece was used as a whip in place of the old Texas quirt. Near its end was a bunch of short, shotted lashes, called a romal.

Jim's rope—an important part of his outfit—was in length sixty-five feet, and was composed of eight narrow strands of a yearling's hide twisted together.

His horses—Jim's particular pride lay in his string of horse-flesh—were thoroughbreds, from his pet Whitefoot down; six were coal-black, or black and white-footed, like Whitefoot, and six were swift, powerful grays.

The fashions Jim set were followed in a somewhat modified degree by all the men under him. It was as fine-looking a company of freebooters as ever lived that was wont to ride out of a morning from the Hole-in-the-Wall under Jim's guidance.—From "The Rustler, A Tale of Love and War in Wyoming," by Frances McElrath.

Men, women, boys and girls, all have an equal opportunity to capture the grand prize of \$500.00 cash, in the Dot Contest, on page 9 of this issue. 207 cash prizes are offered. The contest closes this month. Don't wait. Count now.

The Housewife

MOTHERHOOD

So little a soul! scarce a cry
Or a name!
Hedge it in lest it fly
To the heaven whence it came,
For the soul knows its wing
And earth's night so bewild'ring
May fright the small thing!

So little a soul, scarce a breath!
Lost its way, drifted far,
Like a rose-petal whirled
To the world from a star.
On the crest of a wave balancing
Between life and death, night and dawn,
(Heaven lingers so near)
Lest it tremble with fear,
Lest it open its wings
And be gone!
—Nellie H. Wordworth, in Boston Journal.

THE HOUSEKEEPER

IF YOU desire to varnish furniture on which the first coat of varnish is not badly scratched and worn (if it requires it, the entire first coat must be removed with sandpaper), first wash the article to be varnished with borax-water, to make it perfectly clean, wipe dry, then give a good coat of varnish, taking care not to have the varnish too thick.

Ten drops of spirits of niter in one tablespoonful of soft water will be found efficacious in removing ink-spots from any kind of furniture. Apply with a feather.

The following preparation makes an excellent polish, and will not dull nor injure the varnish already on. Take two tablespoonfuls of sweet-oil, one tablespoonful of turpentine and one tablespoonful of strong borax-water; "shake before taking," to mix the ingredients thoroughly. Apply with a soft flannel cloth. If there are scratches and dents, they may be removed by wetting with warm water, covering with a damp cloth and applying a hot iron until the moisture is evaporated. This being done, a cloth saturated with linseed-oil should be placed over the places for several days before varnishing.

My furniture needs to be polished at least twice a year.

An excellent polish is made by thoroughly mixing four ounces of shellac, two pints of linseed-oil and one pint of turpentine, then adding four ounces of ammonia and two pints of alcohol. Shake well just before using.

Turpentine will clean embossed leather; it will also harden it, but it can be softened by an application of crude oil rubbed briskly on the leather. Of course, this oil must be all wiped off, to prevent soiling one's clothing.

Sweet-oil and putty-powder, followed by soap and water, will brighten brass and copper, and sweet-oil alone will brighten green blinds that are dingy and faded. Rub on with a flannel cloth.

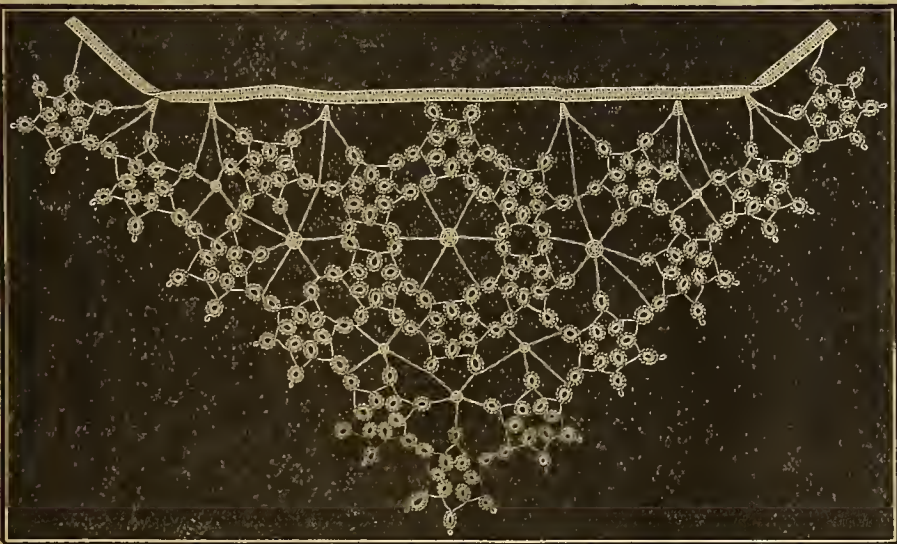
ELLA BARTLETT SIMMONS.

CORNER FOR HANDKERCHIEF

ABBREVIATIONS.—D, double; p, picot.

The tatted medallions that form the groundwork of this dainty border are made with No. 100 cotton thread as follows:

6 d, p, 4 d, p, 6 d, close, leaving a short length of thread between rings. Another ring of 8 d, p, 8 d, close. Make another ring like first ring, joining at first p to p of first ring.



Continue until there are six rings joined in the center, with six on the outside. Join six of these little medallions together by two of the outside rings for the center of the corner, then make a row for the outer edge, joining by one ring to each other. After basting firmly on some stiff material, with an extra medallion on either side of the central figure, as is plainly shown, also one strip of narrow lace braid for a foundation, fill in with spiders made of lace thread, catching through p of every outside ring, and weaving back and forth a short distance on the groups of three threads stretched at intervals from the braid.

JULIA A. WILLIAMS.

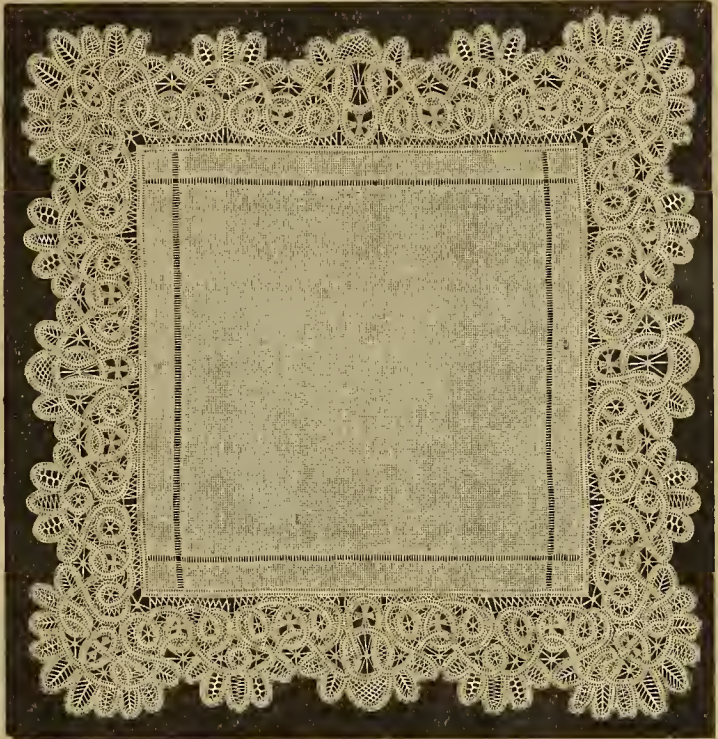
PERSIAN COMPLEXION SECRET

Persian ladies, who are said to have complexions whose bloom and velvety softness are simply wonderful, use no cream or ointment on their faces. Instead they apply a coating of white of egg half an hour before their daily bath.

When this has completely dried it is sponged off with tepid water, to which is added a little tincture of benzoin, and then the skin is sponged over with cold milk. The white of egg cleanses the skin, and the treatment described removes all impurities from the complexion, leaving it as smooth and soft as that of a child.—New York Weekly.

BATTENBERG SQUARE

This is suitable for the center of your polished dining-table, as this style of decoration has superseded the fancy



cloth upon the table when not in use. The stitches used are varied, making a very elegant article when finished.

LIVING IN A NEW HOUSE

While to many women living in a new house seems to be the ideal life, it has a great many drawbacks. The newness of plaster, which in these days is quite a hurried affair, is apt to create much sickness in the way of heavy colds. When there are young children in the family care should be taken to keep the beds well away from the walls. The swelling of doors and windows after a rain makes them very hard to open, as any woman knows who has tried. How her body and arms have ached opening and closing a swelled door many times a day, and attending to windows that must be changed in height!

Ants frequently follow new plastering in such quantities that life is almost a burden, and with all the boasted convenience of modern improvements, the added care to the housekeeper to guard against closed pipes and penetrating odors will more than make up for any great enjoyment that may be obtained from them.

A well-seasoned house all through is not found these days, in the rush and hurry of building, and the eager desire to get as much as possible in the house for the least money. Houses are being built by the score, but very few homes; for as each one seems more unsatisfactory than the former one occupied, we get to be a class of wanderers, seeking for that which we will never find.

Such poor lumber is used in so many of the new houses, such shams in the way of veneer, that it is not to be looked for that they can be anything but shabby in a very few years. The cost of materials and building has been very high the past few years. The greatest cost is the plumbing. Unless this is of a good quality nothing but trouble need be looked for afterward. A very ordinary bath-room and outfit will cost at least three hundred dollars. It is difficult to tell where to save, and what to leave out, for it is always less expensive to put in pipes and such things before the floors are laid. Some attention should be paid to good floors. If narrow, good lumber is used in bedrooms, carpets could be dispensed with and small rugs used. The kitchen floor should be of the very best lumber, and care taken that it does not become defaced during building. A swing-door from the kitchen to the dining-room is a great convenience, but should always have a pane of glass in it.

To be able to have one's own home is the goal for which we all try, and yet so much self-denial is put into the saving for it as to almost rob life of half its pleasure. We reach out too far, and require too much to satisfy us. If we could be content with more simple homes we would find time for rest, enjoyment and happiness that few of us know anything about. The restfulness of the past seems gone, and we are in too much of a hurry to enjoy what is the nearest at hand. More simplicity of living would produce this state. W. D. M.

Our housewives should be interested in the large Cash Prizes offered in the Dot Contest, which ends this month. See page 9.

Radcliffe

The Saving Shoe for Women

Radcliffe Shoes are a mystery to many people. It does seem like a miracle to make a shoe of the finest selected materials and with the highest shoemaking skill and sell it year in and year out for a third less than you could expect. Many a shoe sold for \$3.50 will not stand comparison alongside of the Radcliffe Shoe at

\$2.50 a pair

Look at the new line at your dealer's. If he should not have them send us his name. We will tell you who sells them near you and send you, free, a book of shoe styles.

THE RADCLIFFE SHOE CO.
Dept. 11, Boston, Mass.

The EGGS

the coffee roaster uses to glaze his coffee with—would you eat that kind of eggs? Then why drink them?

Lion Coffee

has no coating of storage eggs, glue, etc. It's coffee—pure, unadulterated, fresh, strong and of delightful flavor and aroma.

Uniform quality and freshness are insured by the sealed package.

Absolute Range Perfection

Sold for CASH or on MONTHLY PAYMENTS
Your money refunded after six months' trial if

CLAPP'S IDEAL STEEL RANGE

is not 50 per cent to 100 per cent better than you can buy elsewhere. My superior location on Lake Erie, where iron, steel, coal, freight and skilled labor are the cheapest and best, enables me to furnish a Top-Notch Steel Range at a clean saving of \$10 to \$20, quality considered.

Send for free catalogs of all styles and sizes, with or without reservoir, for city, town or country use.

CHESTER D. CLAPP, 603 Summit Street, TOLEDO, OHIO
(PRACTICAL STOVE AND RANGE MAN)

EASY WASHING

Sent on Thirty Days' Trial

Why should women continue to sacrifice their health to hard labor when by using a washing-machine they can avoid all the discomforts, worry and work incidental to wash-day?

The Sprung Washing-Machine

is the simplest, most durable and easily operated machine known. A child can operate it. A piece or a tubful can be washed, and without injury to the most delicate fabric. The heaviest goods thoroughly cleaned.

Write us for free booklet and particulars.

AMERICAN MFG. CO., Dept. X, Arlington Heights, Ohio

PERFECTION FRUIT-JAR WRENCH and FRUIT-JAR HOLDER

make canning easy. Fit any jar-cover. Made of steel. Dull nickel finish. Unbreakable. Impossible to break either cover or jar. Hot jars handled without inconvenience. Jars sealed perfectly tight.

Ask your dealer, or send 25c. for set complete, post-paid.

DRAKE & MILLS, CLEVELAND, OHIO

If afflicted with weak eyes, use

Thompson's Eye Water

THE accepted history of Japan, written in 712 A.D., relates as a fact the descent of their ancestors direct from heaven. As they made their way over the island it is said they found a number of barbarous tribes, chief among them being the only surviving race, known as the Ainu.

As the Japanese increased the tribes all disappeared save the sturdy Ainu. They must have been a powerful race in those days, for after much driving about and great hardships they are still possessed of fine physiques. In the struggle for supremacy the Japanese were victors, as they always were in olden times, and the first possessors of the land were forced to seek refuge in other parts.

They left the mainland and settled in Yezo, the Kurile islands and upon the Russian possession of Saghalien, numbering now about twenty thousand. Up to the present time they have retained their customs of centuries ago, preserving their civilization primitive to the last degree.

These people are wonderfully intelligent, and possess characteristics quite unknown among other races. The men are about five feet four inches tall, and very sturdy, bearing no resemblance whatever to any oriental race. They are very hairy; beside a heavy growth of hair upon the head and a long, flowing beard, which gives them a most venerable appearance when advanced in years, frequently the entire body is covered with a growth of black hair fully an inch long. At the sight of this unusual feature a creepy sensation takes possession of the observer, and is not easily overcome, doubtless because of the association of such growths with lower forms of creation. Otherwise they are pleasing to look upon.

As they "entered in and possessed" the islands their attention must needs be turned to agriculture; for in those frozen northern regions there was little natural food-supply other than large game, chiefly bear, scattered over the forests, and which was difficult to secure with no other means than bow and arrow.

Having always lived in the comparatively warm climate of the mainland they knew but one form of architecture—that of building their houses from the long straw gathered after the millet harvest. Up to the present time they have rarely made any departure from their first plans. When a farmer builds his house, if he wishes to make the smallest change from the usual style he first prepares a feast, to which he invites all the village officials, and when they are completely intoxicated he gains their consent to his plans, and proceeds to build. The farmer and his wife both work at the house-building, and the village chief comes, bringing his entire family to aid in the construction. The house is made of long grass woven into great squares, which are put up and bound together at the four corners, forming the sides. The roof is then made and put in place. A chimney is quite unknown, but an opening in the roof, just above the hole in the floor, which forms the fireplace, affords a means of escape for the smoke. The cooking is all of the simplest form, and is done over this open fireplace, amid curling smoke and flying sparks.

A small platform extends around three sides of the room. This is about four inches above the floor, and is considered a fitting place upon which to sleep. The bedding consists of little more than woven matting, which is used for covering and also to sleep upon. If the ingenuity of a Westerner were taxed to the last degree a more complete device could not be invented for the killing off of a race than the houses and beds of these people; yet they live, and seem to thrive through the winter months. I received a letter from a farmer's daughter last winter, and she states it was thirty degrees below zero, and the ink was freezing as she wrote.

There is but one window in the house. This faces the east, and is dedicated to the gods. It being sacred, no one is supposed to ever look out that way, and it is next to a crime to look into the room from the outside through this holy of holies. The only decorations about the window, if such it may be called, are the strange offerings to the farm god. These are simply whittled sticks. Clusters of shavings are stripped down to a certain point on a common pine stick, and left in a bunch. These are supposed to be well pleasing to the god who regulates the production of the soil.

When the farmer is settled in his new house, and the general drunk is over, he looks to the cultivation

A Strange and Primitive Race

By JESSIE ACKERMANN

of his small plot, for there are no large farms. Strange to say, these people have never conceived one idea of improved methods to lessen toil or draw from the soil the best it can yield; hence, they have no system of cultivation. The idea of enriching the land is quite unknown to them, and when, by reason of repeated use, it becomes impoverished their only remedy is to "rest it" and begin to spade up a new plot.

As they do not farm for the general market, but each for his own supply, there is not a great variety of production. Beans are a common article of food, and are raised in goodly quantity. In the fall, when the beans are ripe, the plants are uprooted and dried in the sunshine, and the little white beans are taken one by one from the pods and placed in winter storage.

The squash family in almost endless variety thrives, and when well ripened may be kept through the long, cold season. The seeds are planted near dwellings or sheds, and the vines are trained up the sides and over the roofs, adding much to the picturesque farm scenes. When a flower appears upon the vine a small board is at once suspended beneath it. The young squash is thus protected from accident, and rests upon it until it is fully ripe.

In harvesting the millet and rice the method is both unique and original. Among more progressive people it would be considered quite impossible, but by plodding toil they finally accomplish the task of gathering in the grains. Men and women walk through the rice-beds and millet-fields, cropping off the heads of the grain with a sharp shell. This is only an ordinary mussel-shell used in its natural state. A small cord is twisted from elm fiber, and when dried is passed through a small hole made in one side of the shell near the hinge. By means of this string it is tied to the middle finger, the hollow side toward the palm. The stalk of the millet or rice is caught between the shell and hand, and when well ripened readily yields to the pressure which severs the head from the straw. Thus the entire crop is gathered into a house, where the grain is beaten out upon the floor.

Every well-regulated farm has a storehouse, in which is placed all supplies for the winter. To keep them in the house would be quite out of the question, not so much because of the lack of room as the danger of attracting wild animals to the house. There is no protection against such an invasion other than a mat hung at the outside door and a paper screen at the inner one. The store-room is small, perhaps six by ten feet, and is built upon four strong posts about six

away in triumph the carcass of an old bear; he is not satisfied unless his efforts result in capturing a live cub. This, and this alone, is the realization of the farmer's highest hopes.

When caught, the little creature is taken to the farmer's home and tenderly cared for. If it is very young, diligent

search is made to find some woman who is nursing a young child. To her care the cherished prize is committed until it is old enough to take other food. I have twice seen women who nursed a child at one breast and a cub at the other. Through the summer months every choice bit that can be spared from the scantily supplied family table is gladly bestowed upon the object which has now become a neighborhood pet. Girls and boys gather from the village, and frequently sacrifice a rare morsel to his never-satisfied appetite.

This continues until early autumn, usually November, when the sleek, well-fatted, full-grown bear furnishes the chief dish at the village feast, in which all participate. The farmers come from far and near, unbidden, but always welcome. They are completely given up to the festivities of the hour.

Every house in the village shelters kinsman, farmer or stranger, and for about three days good-fellowship prevails to such an extent that it might be said "they had all things in common."

The well-feasted, saké-filled farmer returns to his home to importune the gods that the finding of a cub may be his lot and portion before the spring sun shall drive him back to the spade and the seed-bag.

THE VOLCANOES OF THE PHILIPPINES

Of interest in connection with the recent volcanic eruptions in the West Indies is the report of George F. Becker on the geology of the Philippine Islands which has just appeared in Part III. of the Twenty-first Annual Report of the United States Geological Survey, and which contains a review of everything bearing upon the geology of these islands.

In many respects the Philippine Islands so closely resemble the West Indies, especially in being the scene of violent past and present volcanic energy, that the chapter of the report on the active and extinct volcanoes of the archipelago is at this time particularly interesting. While it was possible to visit but a few of these mountains owing to the hostility of the natives, much valuable information from local and other sources was collected. Forty-nine of the eruptive mountains were located among the islands, and their altitudes and the dates of their eruptions obtained. Conspicuous among them is Mt. Apo, the highest mountain in the Philippines, which rises ten thousand seven hundred and sixty-one feet above the level of the sea. At Camiguin de Mindanao, one of the most interesting volcanoes of the group, a cone nearly two thousand feet in height, has risen since 1871 over what

was formerly a lake, the basin of which was presumably an ancient crater. Mayón, or the volcano of Albay, is said to be the most symmetrically beautiful cone in the world; and the famous Taal volcano, situated on a small island in the lake of Bonbón, is readily accessible from Manila. The accounts of the eruptions of these and other volcanoes of the group bear a striking resemblance to those of the recent outburst of Mt. Pelée in Martinique. Of an eruption which occurred in the year 1641 near Joló the report quotes: "The darkness and atmospheric disturbance were so great that the people of Joló could not perceive whence came the stuff which fell from heaven upon them." And in one of the numerous eruptions at Taal loud detonations like discharges of artillery were heard, incandescent stones were thrown out, and a great fire ran like a river across the island. The fire then shifted into Lake Bonbón, throwing



AINUS AND VILLAGE CHIEF BESIDE THE STOREHOUSES

feet high. There is no means of reaching the door, as the steps or ladder would endanger the safety of the precious stores. The ever-present small boy is called into service, and from the shoulders of his father lands upon the platform before the door. From this place he hands down the required articles, and with a cat-like leap lands upon the ground.

In the winter the farmer has little to do about the farm, as the snow is very deep and there are no animals for which to care. This is the season that furnishes his highest enjoyment. Leaving the vast stretches of unbeaten snow, he sets out upon his favorite sport, that of tracking and hunting bear. The greatest victory that comes to him is not to carry

up water and ashes in immense masses. "The water grew hot and black, fish were strewn on the beaches as if they had been cooked, and the air was so full of sulphurous smells and the odor of dead fish that the inhabitants sickened." At the eruption of Albay, in 1814, twelve hundred lives are said to have been lost.

In drawing comparisons between the volcanoes of the Philippines and those of the Dutch East Indies Mr. Becker notes that "Papandayang, in West Java, had a great eruption in 1772, destroying forty villages. Galung Gung in 1822 destroyed one hundred and fourteen villages, and it is some measure of the violence of the Krakatoa explosion of 1883, that over thirty-six thousand people perished."

WHAT DO YOU SEE ?

GERMAN allegory tells of two little girls. They had been playing together in a strange garden, and soon one ran to her mother full of disappointment.

"The garden's a sad place, mother."

"Why, my child?" asked her mother.

"I've been all around, and every rose-tree has cruel thorns upon it?"

Then the second child came in, breathless.

"Oh, mother, the garden's a beautiful place!"

"How so, my child?"

"Why, I've been all around, and every thorn-bush has lovely roses growing on it!"

And the mother wondered at the difference in the two children.—Zion's Outlook.

LIFE AN EASY LESSON

These hurrying days, these busy times of ours, are wasted when they take our hearts away from patient gentleness and give us fame for love and gold for kisses. Some day when our hungry souls will seek for bread our selfish god will give us a stone. Life is not a deep, profound, perplexing problem. It is a simple, easy lesson, such as any child may read. You cannot find its solution in the ponderous tomes of the old fathers, the philosophers, the theorists. It is not on your book-shelves, but in the warmest corner of the most unlettered heart it glows in letters that the blindest may read—a sweet, plain, simple, easy, loving lesson. And when you have learned it, brother of mine, the world will be better and happier.—R. J. Burdette.

WEIGHT OF HABIT

Agassiz, wishing to study the glittering interior of an Alpine chasm, allowed himself on one occasion to be lowered into a crevice in a glacier, and remained for some hours at midday at a point hundreds of feet below the surface of the ice. After gratifying his enthusiastic curiosity he gave the signal to be drawn up. I heard him tell this himself, and he said, "In our haste we had forgotten the weight of the rope. We had calculated the weight of my person, of the basket in which I rode, and of the tackling that was around the basket, but we had forgotten the weight of the rope that sank with me into the chasm. The three men at the summit were not strong enough to draw me back. I had to remain there until one of the party went five miles—two and one half out and two and one half back—to the nearest tree to get wood enough to make a lever and draw me up."

When habit lowers a man into the jaws of the nature of things it is common, but it is not scientific,

Sunday Reading

to forget the weight of the rope. That weight is a fact in the universe, and the importance of not forgetting it is one of the most unanswerable teachings of science.—The Homiletic Review.

DEBT PAID WITH ROSES

An odd church debt of one hundred and fifty-seven years' standing was canceled yesterday, when the congregation of the Tulpehocken Reformed Church paid one hundred and fifty-seven red roses to the descendants of Caspar Wistar. A Dutch custom transplanted to America two centuries ago was revived by the payment of the debt of flowers.

More than one and one half centuries ago Caspar Wistar, one of the pioneers of Pennsylvania, deeded one hundred acres of land bordering on Tulpehocken Creek in trust to a Dutch Reformed Church. The only condition was that the church should pay to Mr. Wistar or his descendants a red rose each year. The condition was never fulfilled until yesterday, when a number of Caspar Wistar's descendants, who are numbered among the wealthy old families of Philadelphia, were paid the arrearage.—Philadelphia North American.

"PUT OUT THE RED LIGHT"

"Beautiful! How grand!" we say, when some great man thrills us with his words of eloquence. Our eyes fill with tears, and we go away feeling that, after all, there is much goodness left. And, indeed, it is grand when men are able thus to stir the hearts of their fellows through the power of words.

But do you not think that humble trainman preached a sermon which will touch the hearts of men all the world over, wherever it is told, not long ago? There had been a terrible accident, and the flagman had been fatally crushed. He lay on the ground moaning in agony. Suddenly he roused, and said to a friend standing near, "Put out the red light for the train coming on behind!"

None of self, but all for others.

Later still. The occasion is the awful tunnel accident in New York City. Under a pile of broken timber and iron lay a plainly dressed man. Suffering intensely, he had been begging that the heavy weight should be taken from him.

"But if we stir these timbers just now it will probably kill this lady and her little one," some one said.

"Then work away; I'll stand it. Help them out first," came back the whispered answer from the pale lips of the sufferer. And he bravely nerved himself to wait. They finally reached him, and so terribly was he injured that for a long time it was thought that he could not live.

Heroes, do you say? Yes, and far more than heroes. They were men in whose hearts the fire of love for their fellow-men burned like altar-fires.

You and I do not like selfish men. We shrink away from them. Their presence chills us. They seem to us so cold and unnatural. We fear to trust ourselves to them lest they prove untrue and let us suffer when the hour of crisis comes. But I wonder if there be no taint of selfishness in our own hearts. It is easy to say grand things. Our lips every day sing beautiful songs of praise and religious fervor. Does our devotion stop there? When the small things of life come to try us, do we fail or does our courage endure to the end? For right here is the real test of character. Any man can be a hero in time of peace. Trouble sifts us as the fire does the bold.

For many years carrier-pigeons have been used by people going away across the sea to take back to the friends at home messages of love and cheer. When the steamer has sped far out over the ocean these little birds are set free, with the letters written to the dear ones at home fastened upon their bodies, usually under one of their wings, where they are safely carried. For a few moments the doves circle about the vessel as if dreading to strike out across the waste of waters, then gathering courage they sweep aloft and shoot into the mist, bound for home. Often these birds are expected to make a flight of three hundred miles or more, without food or chance to rest, through storm and wind. Brave little messengers, we say. But stay. Do we remember what is further told us of these carrier-doves—that more than half of them drop into the sea, tired to death, and are lost? Now we must surely say, "Dear, faithful carrier-doves! You give your very lives for us."

It is not a light thing thus to give one's self. We speak about it. We dream that we could do it. Are we really ready and willing to do what we say and what we dream?

Men everywhere need the red signal of warning danger. Will we set it out, cost what it may? Everywhere there is the suffering which sin brings. Are you and I ready to endure pain a little longer if these dear ones may be saved? These are very practical questions. Let us not answer them lightly. But while we bring our vows, may we ask Him who has all strength to help us keep our promise true!—Edgar L. Vincent, in the Epworth Herald.

The Family Physician

By ROBERT B. HOUSE, M.D.

ANTIDOTE FOR CARBOLIC-ACID POISONING

THE importance of the discovery of a sure, swift and easily procured antidote to carbolic acid may be inferred from the fact that it has been asserted that there are more accidental deaths from poisonous acid than from all other poisonous drugs combined. That antidote is common cider vinegar, which can be found in most households.

The masses have been taught to consider carbolic acid a valuable antiseptic of wide applicability. It is sold freely without restriction, and is kept on the pantry shelves in many homes.

It is true it is labeled "poison," but the people through familiarity with it have lost much of their fear. It is not strange, therefore, that the ignorant and careless suffer accidentally, and that the angry and malicious use the poison for their evil purposes.

For a long time doctors were helpless in the presence of carbolic-acid poisoning, and even now, it is said, many of them are ignorant of the fact that there is an antidote.

The discovery of the virtue of cider vinegar in such cases was made by Dr. Edmund Carleton, of New York, who thus relates the manner of it:

"One day, while making some experiments with the pure acid, an unlucky movement sent two ounces of it upon my hand. In about two seconds I had it under a stream of water, and washed it, but to no purpose; it became white and numb. There seemed to be no escape from the usual result—despumption and slow recovery of the sense of touch. But the odor was persistent and unpleasant. In the belief that it might be changed thereby, a servant was sent to the kitchen for a cupful of cider vinegar. While bathing and rubbing the affected parts with vinegar, what was my amazement to behold a complete restoration of color and function! In five minutes nothing remained in evidence except the modified odor."

C. S. Kinney, M.D., connected with the state hospital for insane at Middletown, N. Y., gives the following account of the demonstration of the fact that vinegar is an antidote for carbolic acid taken internally:

"A nurse called me to see a man who had swallowed some carbolic acid. The patient was found with his lips, mouth and tongue coated white where the acid touched them, and the strong, characteristic odor of the acid was present. One half cupful of vinegar diluted with an equal amount of water was at once given to him, and this followed in a few moments by a second dose of vinegar and water. As the time hung heavily on my hands while waiting for the stomach-pump, the patient was given some milk, which he willingly drank. The odor and the discoloration from the acid had disappeared from the patient's lips, mouth and tongue on taking the vinegar and water, and on using the stomach-pump no odor from the liquid that was pumped from his stomach could be detected. After the stomach had been carefully washed out the patient was fed with hot milk for several days, and no further symptoms developed. Since seeing Doctor Carleton's explanation for the use of vinegar as an antidote for the acid I have had an opportunity to test its efficiency in a number of cases, and have always found it to be reliable in every particular, and in no instance where the vinegar has been used within a few moments has there been any eschar formed."

It has been repeatedly demonstrated that acetic acid is also an antidote to carbolic acid, acting precisely as vinegar.

The Family Lawyer

By JUDGE WM. M. ROCKEL

Legal inquiries of general interest from our regular subscribers will be answered in this department free of charge. Querists desiring an immediate answer by mail should remit one dollar, addressed "Law Department," this office.

IMMIGRATION.—C. W., Nebraska, inquires: "Will my mother, who is over seventy years old, and has probably three hundred dollars in money, be prevented from immigrating to this country?" I am of the opinion that the law does not prohibit her immigrating, but for full information the inquirer had better write to the Commissioner of Immigration, Washington, D. C.

INHERITANCE OF LAND.—R. M. C., South Carolina, inquires: "A. deeds his daughter a lot of land, and said daughter marries Mr. E.; after a time the daughter has a son, and in a few months the daughter dies, and in a few more months the son dies. The question is, Who is the proper owner of the land, Mr. E. or Mr. A.?" I am inclined to believe that under the laws of South Carolina, Mr. E. is the proper owner of the lot.

DEED IN PLACE OF WILL.—E. W. G., Ohio, asks: "If one wishes to make a deed of home in place of will, consideration 'love and affection' or for care during last days, leaving out other heirs, will the same hold under laws of Ohio? Can one include all (or part) of household goods in the deed, the deed to be placed in escrow until death of the person making same?" Yes, a person may make a deed in place of a will, and place it in the hands of a third person to be held until his death. In making such a deed it must be delivered to the third person unconditionally and with directions to deliver it to the person intended at a certain time or at the happening of a certain event. The deed delivered conditionally would be defective. In other words, the maker of the deed must relinquish all right and control over the disposition of the property he has made. Of course, he could retain possession of the property until the deed was delivered to the person intended. It is possible that such a deed might include household goods, but it is an unusual way for transferring such goods. It would probably be better to make a will, drawn by a competent lawyer.

LABOR ON HOLIDAYS—PARTNER'S RIGHT OF FUNDS.—E. W. C. would like to know: "If an employer could discharge a hand that he has working for him, if the hand goes away on the Fourth of July?—If a member of a firm in equal partnership was laid up on account of sickness, could the other partner keep all the funds?" Generally it may be said that the laws relating to holidays do not relate to common labor, and unless the statutes expressly state that persons employed need not labor on such a day, they would not be excused from laboring without an express contract to that effect; therefore it might be said that it would be a breach of contract if the hired hand refuses to work on such a day. In an action at law, however, the sympathy of a jury might be with the hired hand, as it is generally believed that persons are not compelled to work on such a day. But if no work is performed, no wages need be paid.—If a member of a firm was laid up on account of sickness it would be proper that his share in some way contribute to making up for the loss of his absence, but the partner could not keep all the funds. Such questions are settled by courts of equity on the principle of justice and right.

THE North Sea dashed in a fury of hatred against the strong, challenging dikes of Holland. The sky over the fishing-village of Scheveningen was fast darkening. Anxious faces were turned toward the water, for many of the fathers and sons were out at sea. Even the blue-eyed, rosy-cheeked little children were sad, for they, too, had learned that the sea was their enemy as well as their friend. The canals, that so often stretched like bands of shimmering silver on the sun-lit turf, were dark with a reflected gloom, and the air was damp with mist.

Away from the sea the scene was less dreary, for the houses were gaily painted, and their sharply pointed roofs glowed cheerfully under a weight of soft red tiling.

On the broad window-sill of a tall yellow house are hyacinths gracefully bending with fragrant blossoms of purple, red and white. Behind the flowers a child's face is seen—a round little face, bright with expectation.

A sturdy boy of fifteen hurries down the street; the face at the window disappears, and the boy enters the open door. It is Hans, Gretchen's only brother. She playfully tosses his felt slippers to him, and then, as usual, they go skating over the polished floor.

At a west window a pleasant-faced woman is bending over her lace-work, making the most of the dark day.

The room is exquisitely clean. The silver fankards shine like mirrors; the brass trimmings fairly gleam on the carved chests that stand on each side of the fireplace. Quaint Delft bric-à-brac adorns the high mantel, and around the fireplace are pictured tiling in deep blues and rich creams.

Gretchen loves the fireplace, for there she has spent many happy hours. Sometimes she teases her father for smoke rings from his browning meerschau; often he tells her story after story while she gazes straight into the fire.

She loves the twilight, when she and Hans sit so comfortably on the settle, while he tells her stories of Benjamin, Joseph and Moses, and waits so patiently while she finds their pictures on the tiling.

Poor little Gretchen! It is for this hour she has been longing, and she has waited in vain, for there is a troubled look on the face of the dear brother, and she knows there will be no nice time to-night.

"Mother," abruptly asked the boy, "is father really planning to sell Tricket?"

Hans' mother put aside her work and looked into the boy's face. It was a very unhappy one just now, but he had manfully tried to keep back the great tears that were rolling down his flushed cheeks.

"I am sorry for you, Hans," answered his mother, "but I think he is."

"But why should he sell her?" persisted the boy. "Surely we do not need the money so much as that. Why, we couldn't live without Tricket."

"Yes, it will be very hard to do without her, but you must remember how many more blessings we have than the fishermen's families living in constant dread of some one being lost at sea. Horses are a luxury in Holland, and father feels the need of money."

Supper that evening was an uncomfortable affair, a total failure conversationally. Hans did not take his accustomed after-supper place with Gretchen by the fireside, but went to the solitude of his little room.

The rain beat mournfully on the tiled roof, and dashed against the dormer-windows. The creaking boughs of the beech rattled solemnly against the house.

Why should his father sell Tricket? Why did he need money to invest in Javanese sugar-fields? Had he not known and loved and cared for Tricket as only a boy can care for a horse? She was almost his. It was cruel of his father when he knew how much he loved her.

No, he could not bear it. He would leave home, and Tricket should go with him. And when away they would earn money and send it to father, for money was what he really wanted, not Tricket.

His decision was mad. The increasing rain did not make him hesitate; it seemed rather to hasten him to the little, brass-trimmed chest under the bed, where his treasures were kept. He unlocked the chest, and from the securest corner drew out a small purple stocking. How well he remembered the morning his mother had laughingly handed him his bank, with a gold piece in the toe. That was several years ago. Every birthday since then had brought a gold piece, and he had earned a little money at odd times and in odder ways. How guilty he felt; yet the money was his own. He took the precaution, however, to lock the door before wrapping his most necessary clothing in a bundle.

Hark! What was that! Through the wail of the wind and the dash of the rain came the sound of the alarm-bell. Holland's signal of distress. A leak had sprung in the dike. He heard his father hastily leave the house. Peering into the darkness he could see bright lanterns flashing through the blackness of the night, swinging with the motion of their carriers, but aiming straight for their enemy—the sea.

A terrible thought entered the heart of the young boy—terrible because in its execution there gleamed no patriotic wish to help defend his native land, the land his father's fathers and their fathers had wrested from the sea. He would take advantage of his father's absence to leave home. The noise of the

storm silenced the closing of the door, that shut him out in the night, away from his sister, mother and home.

The lightning almost staggered him with its blinding force; the cold wind blew great gusts against him; the thunder mingled with the awful roar of the sea, and through all could be faintly heard the distressed call of the Holland bell.

He entered the stable. Tricket gave a subdued whinny of glad surprise, as if she knew it were best to maintain the greatest quiet. If Hans had before any compunction of conscience in taking her, Tricket's caressing head now dispelled it. He saddled her, and protecting the bundle and himself as best he could, rode forth into the night.

On he rode, away from his home; away from the sea; away from the sound of the warning bell. The storm stayed with him till midnight, when the sky cleared; and at two o'clock the moon peered cautiously from a bank of clouds, as if half afraid, yet fully determined to see what havoc the storm had wrought. For hours he rode against a cold, drizzling rain, and later in the morning reached the nearest inn.

The innkeeper's wife, a motherly looking woman wearing a generously flowered purple calico and an amazing head-dress, seemed at once to realize his condition. She sent her son Karl, a slow, good-natured fellow, with him to comfortably stable Tricket, and when he returned to the house a good, hot breakfast was ready.

Hans was easily persuaded that a few hours' sleep was what he needed. A wave of homesickness went over him as he entered the little bedroom destitute of all comforts but a short, high feather-bed. In its billowy depth he fell asleep, thinking of Gretchen and home.

He was rudely awakened by some one vigorously shaking him, and there stood Karl, greatly excited.

"Say," he whispered, "there are two men here that think your Tricket's a beauty, and want to buy her for the German army."

"Well, they haven't gold enough to buy her," drowsily replied Hans.

"If you won't sell her, you'd better get up and watch them."

"Why? You don't think they would steal her, do you?" asked Hans, now thoroughly awake.

"Well, I was reading up in the hay-loft, and heard them come into the barn, and one said, 'Suppose the chap won't sell her?' The other fellow said, 'Oh, that's an easy matter. Just offer him enough money, and then if he won't sell her, it will be dark some night, and he's dead for sleep, boys always are,' and then he winked," said the excited Karl, forgetting that a wink was scarcely visible through a plank floor and a small mountain of hay.

The boys hurried to the stable. Hans gave a clear, tremulous whistle, but no whinnying answer came. To their boundless dismay they saw that the stall was empty.

Karl stared at Hans. Hans was speechless. "Could she have pulled loose and gone home?" gasped Karl.

Hans solemnly shook his head. "No," he slowly said; "she was too well tied for that. Those men have stolen her. What shall I do?" he asked, despairingly.

Karl looked at him in honest sympathy, and said, "I am sure father will let us take his horses, and we may be able to hear something of her."

Hans told the sympathetic innkeeper why he had left home. The loyal Hollander reproved him soundly for his indifference to the alarm-bell, and advised him to return home, for he was sure his father would know best what to do.

Hans felt that he could not go home. He decided to write to his father, and tell him all, and to state his determination to stay away from home until he had earned enough money to compensate his father for the loss.

The contents of the little purple purse would be greatly diminished, but he must make some effort to regain Tricket. He realized, with a tug at his heart-strings, that Tricket's fleetness was now to her disadvantage and his own, and the attempt seemed almost useless.

It was late that night when they reached the inn of the nearest village. The sleepy host had seen no iron-gray mare pass that way. He lighted them to a room, and promised to call them early.

The boys had been asleep but a short time, when Hans' dream of home was suddenly interrupted by the loud neigh of a horse, and the rattle of wheels as they passed the window.

"Some poor, tired horse glad to get his supper," murmured Hans.

Again the neigh. It was Tricket, and Hans was throwing down straw, and pouring oats into the manger. Then the swishing of straw and crunching of oats lulled him into a deeper slumber.

Again the whinny. Surely that was Tricket. Hans rushed to the window, but could not keep his eyes open. He heard another neigh, and there in the gray, cold light of early morning discerned two men tying three dark horses to the posts in front of the inn.

Two of the horses were saddled. The third, a

pack-horse, seemed by the dejected hang of its head to express a part of the ignominy it felt in being compelled to carry an inanimate load. After another neigh, followed by a quiet "Keep still, you brute!" the men entered the house.

Hans felt as though he were dreaming. The neighing sounded so like

Tricket, and the more he looked at this beautiful dark horse, the more points of resemblance he saw—the same gracefully arched neck, slender legs, heavy mane and tail; but there ended the resemblance, for Tricket was iron-gray.

Again the neigh. He cautiously opened the shutter, and could not resist the temptation to whistle.

Aha! In a flash the excited boy discovered the ruse. The mare knew him. She answered with a loud whinny. She did her best to break the dishonest halter, and in her wild efforts attracted the attention of her new owner, who came out, made her more secure, then returned for another stein.

Hans awakened Karl at once, who grasped the situation with wonderful alacrity for one so suddenly aroused.

"She's been colored!" he exclaimed, in an excited undertone. "Take my knife, cut the halter, and fly for home. The villains are too full of schnapps to overtake you easily."

Hans stepped from the window to the porch, and then jumped to the ground. He cut the heavy halter, sprang into the saddle, and away they went.

With a yell of rage the horse-thieves appeared on the scene, and one of them mounted his horse and lashed it into a gallop. Karl then appeared, and tugged and pulled at the straps and buckles on the pack-horse, while its bleary-eyed owner cursed him for his awkwardness.

On and on sped Tricket, her feet scarcely touching the ground. Bits of soft earth fell in a pelting shower about her, and egged her on at a furious rate.

The eastern sky was brilliant with rose and gold of a coming day, that was fast unfolding before him fields of cleanest green. The windmills in the distance waved their giant arms as if to beckon them onward. The tulip-fields, more gorgeous than ever in the sunlight, greeted them from a distance, and nodded them a bright farewell as they hurried by. Once they stopped in the shade of a beech-tree to listen; but hearing nothing, Hans dismounted to allow Tricket to rest as she ate of the fragrant grass and drank from the canal. He dipped his handkerchief in the water, and washed some of the color from her beautifully arched neck, while the disguised beauty turned her head approvingly. Suddenly she raised her head, and up went her ears. Something had startled her.

Hans looked carefully down the long road. There was no one in sight. He could see a long distance, for the country was flat, and there was no treacherous bend in the road to hide his pursuers, but as he looked across a rye-field he saw what had startled Tricket, and it sent the hot blood through him.

The road that he had taken converged with one that lay beyond the rye-fields. A dense growth of oak coppice hid this road, but above the undergrowth Hans could see two slouch hats moving along at a furious rate. The horse-thieves had taken a rough but shorter road.

Hans sprang into the saddle, but there was no need to urge Tricket. She had scented danger, and was eager to be off. They must reach the main road first. The horse-thieves were increasing their speed, for they had caught sight of the boy, and knew that he had discovered them. On they raced, with the peaceful but narrowing field between them. One of the riders lagged far behind, but the other rode like the wind. Hans kept up with him, however; now he was a little ahead, and still gaining. On they went. Tricket never had gone so fast. The fork of the roads was passed, yet she did not slacken her speed. Hans' hat blew off, and the wind blew his coat straight back behind him. The fat little country children stopped playing with their wooden-shoe boats and yellow ducklings to laugh at the wind-tossed boy; the old beldames dropped their everlasting knitting, and hurried to the doors, and even the storks from their cart-wheel nests on the cottage roofs regarded him curiously.

Karl's home was gained, and the innkeeper laid aside his meerschau to listen, and, much to his wife's astonishment, actually hurried with Hans to the canal. For almost an hour they washed and rubbed. When Tricket was restored to her original color the horse-thieves appeared on the road, followed by their supposed aid. Seeing they were outwitted they wheeled their horses around and disappeared as suddenly as they had come.

The sky was still bright with the sunset's glow as Hans rode down the familiar street that led to his home. He had been gone but three days, yet it seemed as many years.

There at the window was Gretchen, who had spent so many hours watching for the brother who disappeared so mysteriously the night of the storm. How her face changed when she saw him, and how quickly she ran to the barn to greet him.

His mother said nothing—mothers seldom do at such times—but she held her great boy to her heart, and Hans knew he was forgiven.

Jolly Uncle Hans, slipping along in his felt slippers over the floor, whistling a tune of his own improvising, stopped short and thrust his hands farther into

his pockets when he saw his prodigal namesake. He pretended to glare at him from over his spectacles, but the working muscles of his smooth, round red face terminated in a grin. Unpocketing his hands he placed them on the shoulders of his nephew, and gave him a welcoming shake.

Before the fireplace sat his father, quietly smoking. Hans approached him rather cautiously, as though uncertain of how he would be received.

"Father," said he, "I've brought Tricket home. I know I did wrong, and now I want to earn money to buy her from you."

"She's sold already," said his father, in a tone that was not calculated to encourage conversation.

Hans left the room.

Uncle Hans found him a few minutes later in the barn, standing with his arms around Tricket's neck, his face hidden in her long, silvery mane. The manger was full of hay, but Tricket was not eating; she was silently sympathizing.

There was a wave of blue and white cloth in the air, and Uncle Hans blew his great nose quietly.

"Hans! I say, Hans!" he called, when he could stand the scene no longer.

The boy raised his head.

"I—you—did you know I'd bought Tricket from your father?"

Hans shook his head, then said quickly, "Well, I'd rather see you have her than any one, for I know you'll be good to her!"

"Humph!" said Uncle Hans by way of gently acknowledging this compliment. "Say, young man, do you know what makes your father treat you so coolly?"

"No," was the sullen answer.

"He's disappointed in you, Hans, for going away the night of the storm."

Hans blushed furiously.

"Put one hand on your heart, Hans, the other on Tricket, and promise me on your soul and honor you'll never again run from the sea."

"I promise," solemnly replied the boy.

"Now suppose, while you're in the promising business, you just promise to take good care of that mare, for she's yours, my boy; you've earned her," and Uncle Hans strode off to the house, leaving Hans open-mouthed and staring with widely opened eyes at the retreating figure of a man whose heart would never grow too old to beat with love and sympathy for all boys.

HIS GIRL

BY FRANK H. SWEET

THE great week was over, and of the three or four hundred girls who had filled the college buildings and campus with their bright, earnest life not more than a dozen remained, and all but one of these had their trunks packed for speedy departure. This one was Mary Cathcart, who did not know where she could go if she did pack.

This morning she was standing near the entrance of the lecture-hall wondering what she should do. For ten days she had been looking hopefully for a letter, but none had come. None seemed likely to come now.

She had not specially fitted herself for anything, and she rather looked forward to coming back after the summer holidays to take a post-graduate course, when, if it should seem best, she would study for one of the half dozen callings which many of her schoolmates were already entering upon. But it all depended upon the letter, and the letter had not come.

A girl but little older than herself came briskly from the building. It was the French teacher, and she was now going straight to the station, to take the next train for home. Mary looked at her a little enviously.

As the teacher reached the foot of the steps she smiled and nodded. "Not gone yet, Miss Cathcart?" she said.

"No; I am looking around."

"I understand. It is a lovely place. I expected to find it hard to leave, but after the past week everything seems so lonely and dreary that I am glad to get away. When do you go?"

A second before Mary had not even thought of packing her trunk. Now she answered promptly, "On the afternoon train."

"That is nice. Where do you go?"

"To Longley." The answer was unpremeditated; but oddly enough, with it vanished the listlessness and discontent and doubt from the girl's face. As the French teacher turned away she walked rapidly across the campus, ran up the steps, and into the building which had been her home for four long years, and on up the stairs to her own prettily furnished room. To Longley? Of course. That was the place from which she had been expecting the letter.

Two hours later she was at the station, and had purchased a ticket. She had money enough to pay her expenses for a month. Beyond that she did not know.

Whom should she find at Longley? Should she even find anybody? A letter which had come to her after her mother's death, more than four years before, bidding her to enter upon a course at this college, and stating that money would be sent to her from time to time, as before, was all she had to go by. The letter had been postmarked "Longley." Before that money had been sent to her mother from banks in New York, Boston and other cities, but never twice from the same city. During her college course it had been the same.

She had always been generously supplied, and had furnished her room well, and had had money to spend.

Then, as the end of the course approached, she had confidently looked forward to another letter. But none

had come. The one postmarked Longley was her only clue, and even that might have been mailed by some one passing through the place.

Her mother had thought the money might come from a wealthy uncle, who had had some disagreement with the family, and who took this way of saving his pride. He was eccentric and fond of traveling about from place to place.

All this passed through her mind as the train rushed on. At length Longley was called, and Mary rose and hurried out to the little platform of a small country station.

As she looked around her heart sank. There was a long, unpainted wooden building with many small windows, which she afterward learned was a cotton-factory. She could hear the harsh clack, clack, clack-i-clack of the looms from where she stood. Around the mill were several dozen small houses, all alike, and all without shade-trees or yards. She looked eagerly for a mansion with piazzas and lawn, but there was none; only the unpainted factory tenements, with two or three buildings in the midst of them, which might be stores or offices. Compared with the campus and spacious college buildings it seemed unutterably dreary and lonesome, and Mary turned longingly toward the train which was disappearing in the distance. Of course it was a mistake, her coming here.

The station-master was dragging her trunk back from the edge of the platform, where it had been dropped. She went to him.

"There are no Cathcarts here, of course," she said, more as an assertion than as a question.

"No; guess not; never heard of any. Be you lookin' up some?"

"Y-es; I thought I might find a relative here. When is the next train?"

"Not till to-morrow."

She drew a long breath. "Is there a hotel near?"

"Fact'ry boardin'-house; but I guess it's pretty full. That's it down yonder," the station-master answered, pointing with his finger; "the house with a blind swing-in' on one hinge. Be you lookin' fer a job? I hear they're needin' two or three more weavers. That's the only job I know of, unless it's old Tom Farrar's. He's been man of all work 'round the mill ever since nobody knows when; but he has been sick now fer a month or more. But of course ye don't want that job. But, oh, say!" as she started down the platform, "I 'most fergot. I heerd this mornin' that the woman who's been nussin' Tom is goin' off to-day. Maybe ye could get her job."

Mary nodded her thanks, a sudden resolution flashing into her eyes. She was a girl who made up her mind quickly, often on impulse, as now. She had not thought of obtaining a situation; but why not? If she returned to the college town she would scarcely have money enough to pay her expenses through the vacation, even with the strictest economy.

So when the boarding-house keeper grimly informed her that there was not a room, not even a lounge, vacant, she did not look dismayed, as she might otherwise have done, but smilingly inquired her way to the home of Mr. Farrar. There she found a middle-aged woman, who greeted her anxiously. But on learning her errand the woman's face cleared.

"That's what I call a special Providence!" she exclaimed, heartily. "You see, I've got to go, for my sister's sick; but I've been hatin' to leave old Mr. Farrar. The very best I could think of was gettin' a neighbor's little girl, only fourteen, to come; but she'd be a pretty poor excuse. Have you done any nussin'?"

"I took care of my mother before she died."

"Then it's all right, an' I'm glad. You'll not have a bit of trouble lookin' arter things here. Mr. Farrar is one of the best housekeepers I know, if he has kept bachelor's hall. There's everything one wants to do with, an' it's all spic an' span. An' Mr. Farrar himself will not give a mite of trouble. Even when he's wanderin'—which has been most of the time so far—he's gentle an' soft-spoken. One can't help lovin' the old man. But come in! Come in!" stepping back from the doorway to allow Mary to enter. "You might as well begin right off, an' I'll be packin' my trunk."

"Is he very ill?" Mary asked, as she went inside.

"Well, no; not so very now. He's gettin' better slowly. The Doctor says he'll begin to sense things in another week. An', oh, yes! He told me when I fust come that he could pay only three dollars a week, for he had other expenses to meet outside. I s'pose you'll get the same. But it's a nice place to stay, an' I think you'll like it."

She was right; Mary did like it. She remembered many of the tempting dishes which she had prepared for her mother, and she made them now, singing little snatches of song as she did so. She had not known for what she was fitted. Now she knew that she could be a good nurse. Perhaps she could also be good at other things; but she had not found that out yet.

What surprised her most were the books in every room, some of which she looked at with awe. They all showed marks of much use as well as loving care. The old man's hands were rough and calloused, as befitted a man of all work around the mill; but for all that he was evidently a scholar, and Mary felt that she could read proof of it in the strong brow and dreamy eyes.

As the days went by these eyes began to follow her as she moved softly about the room, contented and lovingly at first, then with a questioning wistfulness, as though the clouded mind were striving to grasp something it could not quite reach. Then one day there were several minutes when the eyes grew clear and intelligent, and gazed at her with almost startled wonder. The next day the lucid interval was longer

and several times repeated. But he did not speak; he only gazed at her, and passed his hand across his brow from time to time, as though to clear his brain. Once he turned his face to the wall, and when she went to him a little later she found traces of tears upon his cheeks.

Then came a morning when he was strong enough to sit up in bed; but still the wistfulness and wonder remained in his eyes, and mingled with them now was a certain resignation. Presently he motioned Mary to his side.

"You are a new nurse?" he said.

"Yes."

"I knew it, of course, but I haven't said anything. I—I have been trying to get my mind clear. I thought as I got stronger my mind would get better, but it doesn't. I—I am afraid it's getting worse. I suppose I'm growing old, and it's to be expected, but I've been planning for a good deal of reading and study yet, and haven't realized how the years slip by."

Mary softly stroked his hand. "You cannot get well all at once, Mr. Farrar," she chided. "You have been very sick, you know. But you are gradually growing stronger and your brain is becoming clearer."

"You don't understand," he answered, gently; "my body's stronger, but my mind doesn't seem to gain. It made you out to be somebody else from the first, and has persisted in the hallucination ever since. I've looked in other directions, and changed my thoughts to other things, but it's no use. You're taking care of me, so my mind says that you're somebody whom I used to know a long time ago, but who's dead. I suppose it's what folks call second childhood." Then, changing the subject abruptly, he asked, "How long have I been sick?"

"I do not know. I have been here only two weeks. It is now the fifteenth of July."

He looked startled. "So late?" he gasped. "Why, I—I've got a little girl off to school who ought to have been written to long ago. Will you bring me my pen and paper from the desk?"

She complied; but his hand trembled so that he could not hold the pen.

"Let me do it for you," she said, taking the pen from his shaking fingers, and moving a small table close to his bedside. "Now, how shall I begin?"

But he remained silent, looking at her doubtfully. "I—I—you see, I don't write to her directly," he said at length, hesitatingly. "There is an old friend in New York who acts for me." He was silent for some minutes longer, then went on, desperately, "The letter must be written, and I suppose it'll be best to explain things a little. You see, when I was a boy I had a strong notion for college, but there were reasons why I had to work hard year after year. When at last I was fixed so I could go I felt that I was too old. Besides, I was sort of settled with the books I liked to read, and had lost ambition to go out into the world. But I didn't give up the idea altogether. I would send somebody in my place. So I looked around. I had no relative save a little girl, whom I used to play with when a boy. She had married 'and gone West. I traced her, and found that her husband was dead, and that she was an invalid without means. That was something nearer than college, so I sent her from time to time what money I had to spare. When she died I arranged for her daughter to go to college."

He paused, with his gaze upon the coverlet, his eyes unobservant, dreamy, reminiscent.

Mary had risen, her eyes shining. "Why didn't you write to her directly?" she breathed.

"Well, she was a college girl, you see, with college-girl notions. I liked to think of her as my girl, and to plan things for her. If I'd written to her directly it— it might have been different. You see, I'm just a man of all work in a factory." He held up his hands, white and transparent from his illness, but still knotty and hard from a lifetime of toil. "I don't know much about girls," he went on, "but I want to think of this one as mine, and I can't bear the thought of her ever—"

"Mr. Farrar, do you think any girl could be ashamed of you?"

The quick, passionate cry brought his gaze suddenly from the coverlet. What he read in her voice, in her eyes, brought a look of rapt understanding to his face.

"Then my mind isn't wandering!" he exclaimed, tremulously. "It's she, really and truly? Mary, bring me that tin box in my desk!"

She brought it, and he ran his fingers eagerly through the contents, soon finding a tintype, which he opened and held up for her inspection. It might have been her own picture, so exact was the likeness. She recognized it, with a low cry.

"It's your mother, Mary," he said, softly, "taken just before she went West."

O Golden Age, whose light is of the dawn,
And not of sunset, forward, not behind,
Flood the new heavens and earth, and with thee
bring
All the old virtues, whatsoever things
Are pure and honest and of good repute,
But add thereto whatever bard has sung
Or seer has told of when in trance or dream
They saw the Happy Isles of prophecy!
Let Justice hold her scale, and Truth divide
Between the right and wrong, but give the heart
The freedom of its fair inheritance.

—Whittier.

This month ends the Dot Contest and the \$1,500.00 cash prizes will be awarded to the winners. Have you counted the dots in the diagram on page 9 of this issue? This is your opportunity. Don't delay.

SHIRT-WAISTS

THESE are the most popular items of dress known to-day. Whereas gowns change their style and texture to some extent in different countries, England, Paris, Berlin and all the cities of America are wearing the same styles and materials of shirt-waists. In New York and New York summer colonies it is the style to wear the three-quarter sleeve with the shirt-waist. In all the other cities it is the style to have the sleeves long; therefore, the importers and manufacturers of New York are busy catering to all demands. So popular has the shirt-waist become that shirt-waist suits are shown. They are no more than a skirt to harmonize with the waist and give the latter an excuse for daintiness and smartness.

While the season opened with the closed front and open back in the lead, styles have changed, and the open front is the thing. In swell materials and rich embroidered effects in silk or white the open back is very smart, but the box-plait front is as fashionable as any woman could desire. This plait is stitched on each side one eighth of an inch inside the edge, and is usually finished with three little tucks down the center of the plait. Bought from a first-class manufacturing house these waists always fit if bought to the size, but made up "anywhere" they are as liable to fit some one two sizes larger in one place and two sizes smaller in another as to fit you.

White is all the rage, and the favorite materials are fine lawns, nainsooks, batistes and often swiss. The waists are made with little tucks across the front, the lengthwise styles being most fashionable, to furnish a yoke, falling below this to the waist. Down each side is inserted one or more stripes of lace insertion half way down the waist. If the lace is wide the points end in diamond-shaped (sometimes round) medallions. The sleeves have little tucks, and sometimes lace insertion, to the elbow, and are caught into fitted wristbands or pretty little lace and tucked cuffs. Some of the waists are trimmed in lengthwise fashion on the yoke and across the bust, or below it are inserted rows of lace in crosswise style alternating with small tucks. Some of these waists are elaborately trimmed, while some are quite simple.

A natty waist which is very popular now, especially outside of New York City, is one made up of white lawn covered with black pin-dots. These waists are very simply made, and are so neat and sweet for morning or street wear. They harmonize particularly well with black skirts, and are often seen with skirts to match. Waists in all sorts of colored percales and linens are seen in pretty styles.—N. O. Picayune.

HATS

Picturesque garden-hats are made with wide, undulating brims and low, rather flat crowns. A type especially adapted to youthful wearers is called the Dolly Varden. The usual trimming for these typical summer creations is a garland of roses having very long stems, which at the back fall over the brim and against a soft cascade effect of black velvet or Liberty ribbon. The hat may be made of any of the straw braids, a coarse, open weave being especially well liked.

A style that is exceedingly popular for dressy wear is characterized by the brim flaring at one side, usually the left. The ever-fashionable ostrich-plume provides decoration to a hat of this shape when it is made of fine straw, tulle, chiffon or Irish crochet lace. If only one plume is to be used, it should be arranged to fall softly over the flaring brim, the tip resting on the hair and the end secured against the crown in front with a soft knot of tulle, in which gleam a huge cabochon; a twist of tulle encircles the crown, and is brought over the brim at the back and fastened underneath. When two plumes are possible, the longer should be disposed around the crown, resting on the brim. A black tulle hat trimmed in this fashion with two white plumes and pearl cabochons would be the perfection of good taste.

One of the smartest bits of millinery recently seen suggested the tricorn in shape. The brim was made of white straw in a series of close, narrow frills alternating with equally narrow rows of black velvet, and the low, flat crown was heaped with scarlet currants and green leaves. The berries fell over the brim at the back in the way characterizing all the smart hats this season. This mode is suitable for all but ceremonious functions, and the introduction of berries provides the relief note.

The broad brim and round crown of a beautiful new picture-hat are a mass of white violets, with bits of foliage artistically entwined. Directly at the center of the front is a huge knot of purple violets, and from each side black ospreys spread over the brim. Another knot of the purple-hued violets appears at the back, and a unique touch is given by the single plush rose and bit of foliage, which rest on the hair beneath the brim at the left side of the front. This flower-hat is suitable only for youthful wearers.—The Delineator.

How to Dress

HAT-MAKING

Those raffia hats, what beauties they are, so chic and smart! Then, the girls make them for themselves, and many boys take kindly to the braiding.

Perhaps some of the readers of the FARM AND FIRESIDE have not seen the boys and girls braiding raffia, and sewing the braids into soft, drooping-rimmed hats,

was brought to this country specially for florists, who used it for protecting tender plants; then basket-makers used it, and now it is the rage for hats. Of course, it can be colored, but the deep straw-color is the most favored, as that is just the natural color of the grass. The girls take the raffia home, and soak it all night in clean water, which makes it pliable for braiding. The braids are mostly made of five strands, having three blades of the raffia in a strand. It is very long, and must be carefully managed, so as not to become tangled. Some of the mothers or grandmothers who used to plait their hair in twenty, thirty or forty strands are showing the girls very beautiful weaves; still the weave of five strands is handsome enough, and when the hat is done it looks as fine as one costing eight dollars. Then, too, the fact of making it one's self is so satisfying.

Dickens' Mrs. Joe was not the first woman who took pride in doing things by hand, even to bringing up Pip by hand, and certainly she was not the last.
MARY JOSLYN SMITH.

SQUARE-YOKE DRESS

No material is so tempting as the soft bareges, that are used in the close of the season. The one illustrated is of dove-gray, with yoke of cream mousseline and trimming of guipure lace over white. The hat is a gray chip trimmed with pink blossoms. The design is suited to many materials.

"MONTE CARLO" SUIT

The interest in the "Monte Carlo" coat seems to hold among the good dressers. It can be made of silk, moire or the material of the suit. It is trimmed with heavy Irish linen lace. The skirt has lengthwise tucks, and is trimmed with insertion.

ROUND-YOKE DRESS

This pattern is a very desirable one, as it lends itself to a wide line of materials. The yoke is composed of lace and beading, through which black is run, and is unlined, giving quite a transparent effect. The skirt is tucked lengthwise and attached to a yoke.

SLOT-SEAM SUIT

This suit is conceived in blue linen, a very firm-wearing material. The waist has the new slot-seam effect, caught across from one plait to another with fagot-stitches. It can be worn with long sleeves or elbow-sleeves, as preferred. The skirt has a circular flounce from the front breadth, the trimming being down the seams, which can be bias bands of the material with fagot-stitches across, or black velvet.

CORSET-COVERS

These dainty adjuncts of a lady's wardrobe have received more attention in regard to ornamentation since the advent of thin dresses has become a recognized matter. Now they are creations of filmy lace and sheer material, or composed of fine needlework. Nothing shows so much the lady as these dainty accessories. The one who can blindly wear a thin waist over a gauze shirt and think no one can see it is like the ostrich who hides his head in the sand and imagines he is invisible, and yet in one day's jaunt one can see plenty of them.

The materials for corset-covers varies from the plain India linen to all the lace-stripe and hemstitched effects brought out in the thin white goods, many using the fine cross-bar muslins in the small patterns. The one-piece pattern is a general favorite, and does away with seams, although it takes more material than others.

The corset-cover illustrated on this page is of fine India linen, with rows of drawn-work, trimming of Valenciennes lace, and insertions joined by beading, through which ribbons are drawn. If so desired the drawn-work can be more elaborate. The pattern is laid so that the fronts are on the straight of the goods when drawn-work is intended, but if the insertion is sewed on it, it must be on the bias, making the effect different. A pattern of it can be furnished if desired.

Any of these patterns furnished from this office for ten cents. Waist and skirt are separate patterns.

ROUND-YOKE DRESS.—Waist, No. 4188. Bust measures, 32, 34, 36, 38 and 40 inches. Skirt, No. 4058. Waist measures, 22, 24, 26, 28, 30, 32 and 34 inches.

SQUARE-YOKE DRESS.—Waist, No. 4186. Bust measures, 32, 34, 36, 38 and 40 inches. Skirt, No. 4092. Waist measures, 24, 26, 28, 30, 32 and 34 inches.

SLOT-SEAM SUIT.—Waist, No. 4178. Bust measures, 32, 34, 36, 38 and 40 inches. Skirt, No. 3982. Waist measures, 22, 24, 26, 28, 30, 32 and 34 inches.

"MONTE CARLO" SUIT.—Waist, No. 4174. Bust measures, 32, 34, 36, 38 and 40 inches. Skirt, No. 4117. Waist measures, 22, 24, 26, 28, 30, 32 and 34 inches.



ROUND-YOKE DRESS

SLOT-SEAM SUIT

or putting the braids on frames, making the French creations.

There is an unpretentious-looking feed-store on one of the side streets of the city that has suddenly brightened itself, because so many ladies are calling at the store for raffia.

"Yes, I keep raffia," is the reply many times a day. "It is forty cents a twist."



CORSET-COVER

"I will take a twist, or package," the young lady answers, and pays her forty cents.

For that forty cents she has raffia enough for four hats, and three of her special friends are ready to pay her ten cents each for a portion.

Raffia is a tough grass, native of Madagascar. It



SQUARE-YOKE DRESS

"MONTE CARLO" SUIT

SENATOR TILLMAN'S TAR

A FRIEND of Senator Tillman was inquiring about the politics of the Tillman family.

"We are all Democrats," asserted the Senator, enumerating his relatives, "all tarred with the same stick."

"Ah," observed the caustic inquirer; "but, Senator, didn't you get a little more tar than the others?"—New York Times.

WHERE THE FUN COMES IN

"Oh, yes," said the young housekeeper, "I keep a complete set of household-account books, and it's more fun than a little."

"Fun!" ejaculated the neighbor.

"Yes, indeed. I enjoy it so much."

"Enjoy what?"

"Why, watching my husband trying to straighten them out for me, of course. I get him to do it about once a week."—Brooklyn Eagle.

WHAT THEY TALKED ABOUT

"I was at luncheon the other day," said a North Side woman, "where the hostess was a graduate of Smith College, three of the guests were graduates of Wellesley, two went through Vassar, two had been Bryn Mawr girls, and the other ladies present were graduates of Northwestern, the University of Chicago and Wells, respectively."

"Well," one of her hearers said, "it must have been very interesting. How I wish I could have been there. What did you talk about?"

"Let me see. Oh, yes. About how hard it is to keep help."—Chicago Record-Herald.

ANOTHER OCTOGENARIAN

They were neither of them brilliant scholars, but they liked to move with the times as regards their knowledge of current events, so the daily newspaper was regularly delivered at their humble domicile, and it was Jenny's duty to read out during breakfast-time all the most interesting items of the day. One morning, after wading through the latest intelligence from the front, she turned to another page of the paper, and said, "Herbie, it says here that another octogenarian's dead. What's an octogenarian?"

"Well, I don't quite know what they are, but they must be very sickly creatures. You never hear of them but they're dying."—London Answer.

SHE OUGHT TO KNOW

Four-year-old Ruth was seated on the floor, attending to the cares of a large family of dolls, one member of which was in rather a dilapidated condition.

Wit and Humor

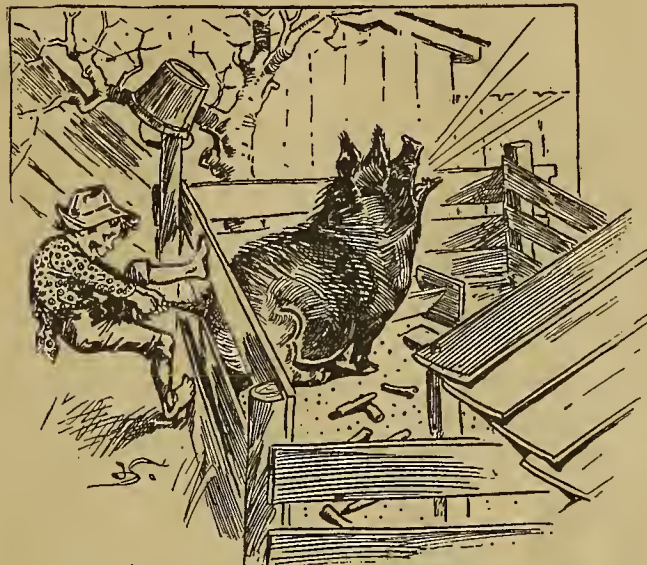
"How old is that dollie, Ruth?" inquired a visiting friend.

"She is fifty years old," answered Ruth, gravely.

"Why, Ruthie," exclaimed her sister Margaret, "I don't think she is as ancient as that."

"Margaret," and the large brown eyes were raised in surprise, "I certainly think I ought to know the ages of my own children."

And Ruth was right. The doll had been her grandmother's.—The Little Chronicle.



UTILIZING THE SQUEAL

Danny's method of calling the hands to dinner.—Judge.

A PRACTICAL JOKE

An Irishman took a contract to dig a public well. When he had dug about twenty-five feet down he came to work one morning and found it caved in—filled nearly to the top.

Pat looked cautiously around, and saw that no one was near; then he took off his hat and coat, and hung them on the windlass, crawled into some bushes, and awaited events. In a short time the citizens discovered that the well had caved in, and seeing Pat's hat and coat on the windlass, they supposed he was at the bottom of the excavation.

Only a few hours of brisk digging cleared the loose

earth from the well. Just as the eager citizens had reached the bottom, and were wondering where the body was, Pat came walking out of the bushes, and good-naturedly thanked them for relieving him of a sorry job.

Some of the tired diggers were disgusted, but the joke was too good to allow anything more than a hearty laugh, which soon followed.—National Land Journal.

PUTTING IT OUT

"Here, here," exclaimed the hotel porter to Uncle Reuben, who was pouring water on the electric-light, "what are you doing?"

"Wa-al, I tried tew blow th' thing out," replied Uncle Reuben, abashed, "an' it w'u'dn't blow, so I jes' thort I'd drown it out, b'gosh!"—Columbus (Ohio) State Journal.

WHAT SAM THOUGHT

A prominent Southerner during his term as congressman visited New York, and stopped at one of the American-plan hotels. Upon sitting down at dinner the waiter obsequiously handed him a bill of fare. Tossing it aside, he passed the waiter a dollar, with the remark, "Bring me a good dinner!"

The dinner was satisfactory, and the congressman pursued this plan during his entire stay. As the last tip was changing hands he mentioned that he was about to return to Washington.

"Well, sir," said the waiter, "when you or any of your friends that can't read the bill of fare come to New York just ask for Sam."

"Thank you," returned the congressman, without disturbing Sam's pleasing belief in his usefulness.—Youth's Companion.

HE COULD KEEP THE DIME

Elbert Hubbard, the eccentric, long-haired editor of the "Philistine," is fond of telling tales on himself, and here is a new one:

The other day he was approached by a bootblack. "Shine 'em up, sir?" said the gamin.

Mr. Hubbard looked at the urchin with one of those fatherly smiles of his. The boy's face was streaked with grime.

"No, my lad," said Mr. Hubbard; "but if you will wash your face I'll give you a dime."

"All right, sir," exclaimed the boy, and he forthwith ran to a neighboring water-trough and quickly made his ablutions.

Mr. Hubbard held out the dime, but the boy only looked up in his face with a grin, and said, "I don't want it, you old hayseed! Keep it yourself, and go and get your hair cut!"—Philadelphia Times.

to another place when the nest has been observed by a gardener. "The goat-sucker, when its nest is disturbed, removes its eggs to another place, both the male and female transporting eggs in their beaks."

What mother-love is shown by this little speckled bird and its tufted mate!

What makes the male bird clap his wings and drum? Is it because he is so proud of his domestic wife, who will risk her life and lose it rather than that one of their brood perish when he is out of sight?

With head erect, and body poised on the short, delicate legs and claws, with the black tufts about his neck like a collar over the spotted gray silken robe, this beautiful drummer, with his keen eye, will ever be a thing of beauty to every lover of birds.

WATCHING FOR FAULTS

"When I was a boy," said an old man, "I was often very idle, and during the lesson used to play with other boys as idle as myself. One day we were fairly caught by the master. 'Boys,' he said, 'you must not be idle; you must attend closely to your books. The first one of you who sees another boy idle will please come and tell me.'

"Ah!" I thought to myself, "there is Joe Simmons, whom I don't like. I'll watch him, and if I see him look off his book I'll tell the teacher."

"It was not long until I saw Joe look off his book, and I went up at once to tell the master."

"Indeed," said he, "how did you know he was idle?"

"I saw him," said I.

"You did? And were your eyes on your book when you saw him?"

"I was caught, and the other boys laughed, and I never watched for idle boys again."

If we watch over our own conduct, and try to keep it right, and always do our duty, we will not have time to watch for faults or idleness in others. This will keep us out of mischief and make us helpful to others.—Baltimore Methodist.

A GOOD THING TO WRITE

"What shall I write on my slate?" said Harry to himself. He could not write very well, but he sat down, and wrote, "A good boy." Then he took it and showed it to his mother.

"That is a good thing to write," she said. "I hope you will write it on your life as well as on your slate."

"How can I write it on my life, mother?" said Harry.

"By being a good boy every day and every hour of your life. Then you will write it on your face, too, for the face of a good boy always tells its own sweet story. It looks bright and happy."—Olive Plants.

THE LITTLE DRUMMER

BY NETTIE BARKER FERNALD

IN THE Smithsonian Institute at Washington, among the most beautiful of the exhibits, is a large American partridge group—the father with his fine feathers, the mother with her tamer dress, and the little partridges clustered close to the mother-bird. As the visitors stand in admiration at the sight it explains the interest that the nature-lover Audubon and his son Victor took in these little drummers. Hezekiah Butterworth has written a most charming account of Victor's nature-study in his book, "In the Days of Audubon." Father and son were very happy together in their search after everything new in the bird-world. When other people thought Audubon crazy or lazy for wasting time hunting the rare specimens, he said in his journal, "No one but my wife and sons believed in me."

"Hunting for nothing," said the hunters. "Catching birds that one cannot eat," said the farmers.

One day he came to the grocery-store, where a group of men had gathered as usual, and had in his hand a little wren. He scarcely noticed the men, so interested was he in his new "real mountain-wren." He cared nothing for his supper. They called to him, "Your supper has been waiting for you an hour."

He replied to the store-tavern keeper, "I cannot stop for supper now. Tell them to clear away the dishes. See what I have found—a real mountain-wren! I have been looking for a specimen like this for years. The world shall see it some day."

The same enthusiasm filled the boy Victor as he hunted the partridge. "Did you ever see a partridge drumming?" he asked of his father one day.

"The partridge does not drum in captivity," said Audubon. "Did you ever see a partridge near you except gliding along in thick bushes like the wind, or rising on wings which you heard rather than saw?"

"On what do partridges drum?" asked Victor.

"The farmers say they drum on a stump. They have quick ears, and they hear steps at a long distance. They stand on stumps, and listen. They usually drum when the air is perfectly still, and when no one is near."

"I will see a partridge drum if I have to lie in the bushes all day."

"If you ever find a partridge drumming in clear view you will be a clever boy—smarter than any farmer lad or young hunter I have ever seen. That is a sight we will not be likely to see together, but one may."

Of this remarkable bird Mr. Butterworth says, "The bird builds its nest in hidden and protected places, among dead leaves and grasses of her own color, and if disturbed when setting will silently and quickly remove her eggs to another place. She will defend her

The Young People

young with great courage and by strategy. When she is surprised with her brood she will utter a pitiful cry, and seem to be struggling helplessly on the ground, as with a broken wing, or she will wheel about the feet of the intruder in a circle, so as to draw and hold his eye, her form quivering. While she is executing these confusing movements her brood will disappear, and then she will whirl away."

One day Victor watched a partridge as it seemed to fall dead before them and then suddenly whirl around. "See her wings quiver as if wounded," he said. In a moment she rose, and was gone.

"I will take a day before the coming of rain, when the quails say 'more wet,' and I will hide in some field of short bushes where there are stumps, and will see a partridge drum," Victor said.

They would hear the bird drumming, but it was always too quick of ear to let the boy see how it was done. One day he stole away, and came back in great glee, and said, "She does it with her wings! Her body is her drum!"

Young Victor got his pronouns wrong, but that mattered little. Frank M. Chapman, of the American Museum of Natural History, in his "Bird-Life" says, "The sound is produced by the 'male' bird beating the air with his wings, as he stands firmly braced on some favorite low perch." He also says, "The drumming of the grouse or partridge as described by Thompson begins with the measured thump of the big drum, which gradually changes and dies away in the rumble of the kettle-drum. It may be briefly represented thus: Thump, rup, rup, rup, rup, r-r-r-r-r! The ruffled grouse makes its leaf-lined nest usually at the base of a tree or stump, and the eight to fourteen buff eggs are laid early in May."

Mr. Chapman says of the little mother-bird, "While the parent is giving us a lesson in mother-love and bird-intelligence her downy chicks are teaching us facts in protective coloration and heredity. How the old one limps and flutters! She can barely drag herself over the ground. But while we are watching her, what has become of the ten or twelve little yellow balls we almost stepped on? Not a feather do we see, until, poking about in the leaves, we find one little chap hiding here, another squatting there, all perfectly still, and so like the leaves in color as to be nearly invisible."

Romanes in his "Animal Intelligence" tells us that the partridge, like the blackbird, will remove its eggs



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SEE PAGE 9 OF THIS PAPER

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icine-man for the tribe
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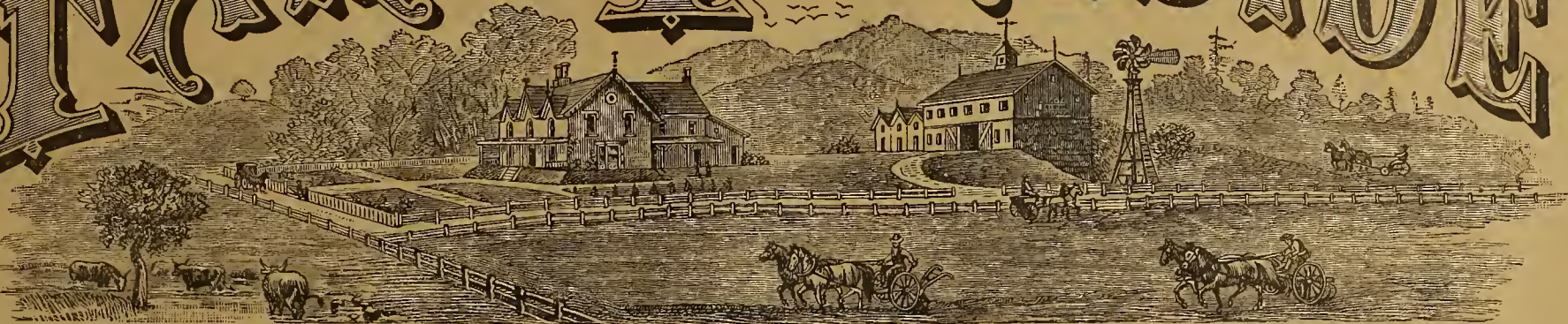
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FARM & FIRESIDE



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COMMENT

THE FUTURE OF SOUTH AFRICA

In a recent notable speech in the House of Commons Mr. Chamberlain said:

"We have no intention that the Boers should break with their old traditions. We desire that they should preserve all the best characteristics of their race, and hope they will shake hands with us, thus securing prosperity in South Africa under the flag which protects different races and different religions.

"The government reserves to itself the important right in the new colonies to refuse to allow the return of, or to keep watch over, persons who showed themselves inimical to good order and peace. We are not going to allow the result of the war to be undermined by intrigues carried on by nominally constitutional means.

"The imperial government has established a crown colony in the strictest sense. The next step would be to add a nominated official element. Thereafter there would be an elected official element, and then nothing but circumstances and time would separate the new colonies from full self-government, the ultimate goal of their ambition. I am one of those optimistic enough to believe that the new colonies would reach the ultimate goal of their ambitions much sooner than many persons now think possible.

"So far as the government is concerned, the surrender promises will be kept in spirit as well as in letter. The government is bound both by honor and interest to this course.

"There remain many questions to be dealt with; a new tariff must be arranged involving intricate questions concerning which experts must be consulted, and the taxation of mines must be settled, but I wish to say nothing will be done to punish owners of mines, as has

AFFAIRS OF NOTE AND MEN OF MARK

been suggested in many quarters. I think it will be perfectly right to lay a fair part of the cost of the war on the principal industry of the Transvaal."

THE BIG CORN CROP

Regarding the outlook for a big corn crop and future prices for meats the "Breeder's Gazette" says:

"Notwithstanding the extensive damage to low-lying, poorly drained fields by the July floods, and despite the persistent rains of the past sixty days in the Upper Mississippi Valley and lake regions, there is at this writing every indication of a full crop of corn. Missouri and Kansas reports are uniformly favorable—more particularly the former—a fact which will be noted with special satisfaction because the crop in those states last year was so nearly a failure.

"Excessive rainfall has in many sections prevented proper cultivation, and as a consequence weeds have flourished and become aggressive in many fields, but reports indicate that as a whole the crop is altogether promising. Should the rains cease and drought ensue, a condition which has not been predicted by the weather prophets, there is sufficient moisture in the soil to practically insure the normal development of the tasseled plants. According to the last government report the area of corn is nearly four million acres larger than it was last year, and the present status of the crop has been interpreted as indicating a yield variously estimated by commercial statisticians at from two billion two hundred million to two billion six hundred and twenty million bushels. The latter estimate is probably excessive, the former being more nearly correct. Even with a full yield, however, for the country at large cheap corn need not be anticipated. The bins are bare. Old corn is like gold coin."

RENTALS OF FARM-LAND

"Values of farm-land in the corn belt have appreciated materially of late," says the "Live Stock World," "and the question of increased rentals promises to be up to renters before long. With these lands now averaging seventy dollars an acre, low rentals are out of the question. Owners want interest on their money. Not long ago Iowa farm-land rented at one dollar and fifty cents to two dollars and fifty cents an acre, but the tenant-farmer must prepare to meet changed conditions. The question is, 'Can the average renter with his shiftless methods make land worth seventy dollars to one hundred dollars pay interest on that valuation?' It certainly cannot be done through a series of years by growing and selling grain.

"There has been much speculation of late as to the legitimacy of present values of land. Herein lies the test. Thousands of farms have been purchased for investment, and unless they earn rentals that will pay reasonable interest on the capital invested, sooner or later the unloading process will begin. City property must earn at least eight per cent annually to pay interest on the investment. Can corn-belt land do the same on the present basis of values?

"Generally speaking the system of tenant-farming pursued in America, unlike that which is pursued in Great Britain, involves a skinning process. It has impoverished vast areas in the East, and will eventually repeat the process in the West."

THE END OF THE FIFTEEN-HUNDRED-DOLLAR DOT CONTEST

Our friends should read the announcement on the 17th page of this paper. To print and mail our large edition it is necessary to go to press about two weeks before the date, therefore this September 1st number goes to press two weeks before the close of the Dot Contest, and most of our readers will still have time, after receiving this copy, to count the dots and enter the list of contestants. You still have the opportunity of securing the first prize of \$500.00 cash. Make this your first business, and do not stop until your count is mailed.

In "The Empire of Business" Andrew Carnegie, the dollar-a-week bobbin-boy, captain of industry, author and philanthropist, says:

"The trouble between capital and labor is just in proportion to the ignorance of the employer and the ignorance of the employed. The more intelligent the employer, the better; and the more intelligent the employed, the better. It is never education, it is never knowledge, that produces collision. It is always ignorance on the part of one or the other of the two forces. Speaking from an experience not inconsiderable, I make this statement, 'Capital is ignorant of the necessities and just dues of labor, and labor is ignorant of the necessities and dangers of capital.' That is the true origin of friction between them."



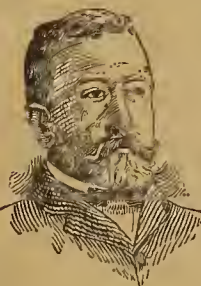
Sir Liang Chen Tung, who is to eventually succeed Wu Ting-fang as Chinese minister to Washington, is not a stranger in the United States. Sir Liang was one of many Chinese youth of rank and promise sent to this country a number of years ago to learn American ways, and he received part of his education at Phillips Academy and Amherst College. For three years he acted as official interpreter of the Chinese mission in Washington under Minister Chang. He served as secretary of the Peace Commission

to Japan at the close of the Chinese-Japanese War, as secretary of the Chinese envoy to the Diamond Jubilee of Queen Victoria, as secretary of Prince Chen on a special mission to Berlin, and on his appointment as minister to this country was in London as secretary of Prince Chen's mission to King Edward's coronation.

William Henry Taft, Governor of the Philippines, was born in Cincinnati, Ohio, September 15, 1857. He attended the Cincinnati public schools, and was graduated at Yale College in 1878, and at the Cincinnati Law School in 1880. He has served as assistant prosecuting attorney, collector of internal revenue, assistant county solicitor, judge of the superior bench, solicitor-general of the United States, judge of the United States circuit court of appeals, and as dean and professor in the law department of the Cincinnati University. In March, 1900, he was appointed by President McKinley as president of the commission to the Philippines "to organize and establish civil government already commenced by the military authorities." The work of the commission was eminently successful, and in due time Judge Taft became the civil governor of the islands.

Henry Cabot Lodge, the junior senator from Massachusetts, was born in Boston, May 12, 1850, and was graduated from Harvard College in 1871, and from Harvard Law School in 1874. He served two terms in the Massachusetts legislature, three terms in Congress as representative, and was elected for the fourth term when he was elected to the United States Senate in 1893. Among the younger men of the Senate none has a more distinguished career. Senator Lodge excels as a statesman, orator and author. He has been

a frequent contributor to periodical literature, and is the author of a number of books, chiefly on legal, political and historical subjects.



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Mr. Greiner Says:

OUR PAPERS.—There is much doubt in my mind about the great advantages of a daily paper, with all the slush and sensationalism it contains, in the farmer's home. Rural free delivery brings the daily, and with it the danger that mere news items will crowd the earnest study of farm papers and farm problems into the background. Don't allow such a thing to happen. Stick to the business paper rather than to the mere newspaper.

WEATHER PREDICTIONS.—The most valuable feature (to me) in my daily or dailies is the weather predictions. Occasionally we are misled by them; but I frequently allow my farm operations to be influenced by these weather reports. It is true that it is best to be always prepared for any emergency that may arise; yet when "showers" are on the program, I am very sure to be particularly careful that everything is under shelter and made snug. If the showers fail to come, no harm is done.

FACT VERSUS FAD.—Now that the Belgian-hare boom is dead and buried, apparently beyond prospect of immediate resurrection, comes Mrs. Rorer, the celebrated exponent of good cooking and expert on cooking materials and methods, and not only urges in her lectures the use of Belgian-hare meat, and cooks it before her classes, but also has gone into the business of raising hares on her farm in Bucks County, intending to sell them next fall at twenty-five cents a pound in the Philadelphia market. The present price there is said to be thirty-five cents. She says (according to a statement in the Bucks County "Intelligencer"), "The special value of the flesh is its being highly nutritious without being stimulating, as rich in nitrogen as beef without the stimulating quality thought deleterious by physicians. The hare-meat is white, of delicate flavor, resembling capon. It is now used in hotels and private families. Canned hare-meat is also being placed on the market." All this is only in line with my earlier remarks and expressions on this subject. The Belgian hare, after first being ignored, then extravagantly boomed and denounced, will finally find the true level of its worth. There certainly is a place for it in rural and domestic economy which it can, and will, fill. This at least is the conclusion at which I have finally arrived.

GROWING HARE-MEAT FOR THE MARKET.—It is interesting to be told that there is one place where Belgian-hare meat finds sale at thirty-five cents a pound, and that the prospect is good for getting twenty-five cents when put on the market in quantity. I do know that one breeder in my neighboring city of Lockport used to sell his surplus stock for culinary purposes at twenty-five cents a pound to private customers right along. Although breeding these animals in large numbers, by thousands in fact, he stated to me his inability to supply the demand. If anybody will be able to start a healthy and deserved boom for Belgian-hare meat, Mrs. Rorer can do it, and I hope she will succeed. Give the hare a reputation as "health food," and its new boom will be assured. Whether Mrs. Rorer, however, will find it quite so easy a task to raise the Belgians as she evidently, and possibly without much practical experience, supposes, is, in my estimation, not quite so certain. The recent Belgian-hare boomers have advertised the animal as practically exempt from disease. We used to find it so years ago. Then we could multiply them, and especially the crosses between Belgian males and common rabbit females—which for meat purposes are practically equal to the pure-bred Belgians—at pleasure, both in confinement and in orchards and groves outdoors. But times have changed. Some disease, the nature of which we do not understand, carries off the young stock by the wholesale and without previous warning when kept in confinement, and kills many older ones. We simply find the animals dead in their pens. The matter of feeding seems to make no difference, either. The partial or entire withholding of green food does not put a stop to the trouble.

A WISE DOG.—Some animals possess almost human intelligence. I have just returned from a visit at my brother's in Ontario County, New York. His practice is to liberate the Belgian hares when nearly two months old, and give them the free range of the place. I there saw the young stock of various ages feeding on the lawn, in the orchard, the meadows, corn-fields, etc., and there they seem to do very well. It is the only way he can raise his Belgians (of course, for meat stock) and prevent their being carried off by disease. His neighbor has a dog which is a great hunter of wild rabbits, and soon catches every one of them which comes into the vicinity. Yet he has learned that the Belgian is a domesticated animal, and he never molests one in the least. No special pains have been taken to teach him, either. But it is with animals as with human beings. Some have greater powers of observation and reasoning than others. The average dog will give Belgian or any other hares little rest. In a neighborhood with plenty of free-roaming dogs it would be useless to try to let hares loose. Cats will take the young ones, and for that reason the liberated hare will very rarely bring up a litter of young ones. But when the litter has reached the age of eight or ten weeks, the young Belgians are beyond danger from that source. The fear is often expressed that the hare when escaped from captivity, or purposely given his liberty, will become a great pest, and destructive to the farmers' crops. My brother says the only damage he has ever noticed is when a specimen takes a notion to eat a few bean-vines or use a flower-bed or border for its special playground. In that case the crack of his rifle soon foretells the appearance of the offending animal in roasted form on the dinner-table the next day.

Mr. Grundy Says:

SPECULATIVE PRICES.—When the price of corn was soaring around ninety cents a bushel in the speculative pit in Chicago an enthusiastic old farmer who had about twelve hundred bushels in his crib hailed me one day with "Hey, there! What do you think of the price of corn now? I'll get eighty cents for it yet! That price won't be long getting to our elevators."

I asked the grain-dealers what they were giving for corn. "Fifty to fifty-eight, according to quality," was the reply.

"There appears to be considerable difference between your prices and those at Chicago," I remarked.

"Our prices are for the real grain. Chicago pit prices are for paper representing bets on the price at certain dates. Pit prices very rarely affect the prices of real grain. The prices of real grain are governed entirely by supply and demand. Some of our farmer friends appear to think that we ought to pay pit prices for corn, and are calling us hard names because we don't," continued the grain-buyer. "They don't seem to fully understand the difference between legitimate trade and speculative betting. Buying 'futures' is much like betting on horse-races and other forms of gambling."

PLUMS.—I have quite a number of Abundance, Burbank and Satsuma plum-trees in my plum orchard, and they have been bearing "by turns" six years. Last year the Satsuma trees were loaded with fine, large plums, and very few of them were affected by rot, while the Abundance and Burbank had only about a dozen plums to the tree. This year the Abundance is well loaded with fruit, while the Satsuma is almost bare. The Burbank has a good many, but they are rotting badly, and I shall get very few. I just finished gathering the Abundance to-day. One little tree not over three inches in diameter a foot from the ground had four ten-quart bucketfuls on it, and all of them were beauties. As I was gathering the plums to-day I saw very plainly the mistakes I made in pruning these trees as they grew. The Abundance must be picked off the tree by hand. If they fall to the ground they burst. In growing these trees I allowed them to reach a height of four or five feet before beginning to form a head, and then they went on straight up about ten feet and then spread out, and most of the fruit is eight to twelve feet above the ground. If I had known what I do now I would have made them form their heads about a foot above the ground, then nipped off the shoots that showed a tendency to grow long and spindling, and kept the head of the tree and the fruit near the ground, so that I could easily gather it from a short step-ladder. I find the Abundance plum a good bearer and a good plum, and it does not rot so badly as the Burbank. I would advise all who intend to plant a plum orchard to include this excellent variety.

TO ENJOY COUNTRY LIFE.—A farmer friend was telling me a few days ago that his brother, who is a merchant in a large city, had just taken his family to a summer resort on the lakes to spend the "heated term," and he was bemoaning the fate of the farmer who is bound to his farm all year round and unable to go anywhere. His brother has left the hot city to obtain a breath of pure air, and to try to get a little tan on the pale faces of his wife and children. He will stay in the country six or eight weeks, at a cost of about three hundred dollars, just to get what his farmer brother enjoys the whole season through for nothing. His children look like plants that have grown in a dense shade, and he hopes that a few weeks in the fresh air and sunshine will put new life and strength in them, and give them the healthy, rugged appearance of country-raised children. As for himself, he feels worn out, not so much from work as lack of pure, fresh, sweet air, sunshine, bird-songs, and refreshing water that hasn't run several miles through iron pipes to reach him. His farmer brother has a good home and all the fresh air, pure water and shade he wants, and the place would be a veritable Eden if he would expend a small sum in fixing it up to make living there thoroughly enjoyable. He needs a good lawn-swing and a couple of comfortable hammocks under the trees; a big flower-bed filled with flowering plants on the lawn, to rest his eyes; a pair of linen trousers, a light linen coat, and a few thin, dressy shirts to put on after the chores are done and a loll in the hammock is in order. He needs his wife out there with him to talk over the happenings of the day and to help him plan for the morrow. But she can't come if he works in the field until sunset, then does a big lot of chores and milks two or three cows before he eats his supper.

If the farmer who lives on his own farm does not enjoy life as well as it can be enjoyed it is his own fault. He has, or can have, everything that is really necessary to make life enjoyable. A man does not need pianos, billiard-tables and other expensive luxuries to make life enjoyable. The main thing is a contented mind and a determination that he and his family shall have as good and restful a time as anybody on earth. The farmer has considerable hard work to do, but the hard work does not last long, and when it is done he can, and should, take things easy. And when he takes things easy he should see that his wife is included. I remember passing a farm home one summer evening a short time before sunset and seeing the owner lying in a hammock talking to his wife, who sat in a chair near him. Just across the road was another farmer and his two boys plowing corn. The first had finished paying for his farm, and had fifteen hundred dollars in the bank. The other had paid for his, and bought another, and was working early and late to pay for it. The first is living to-day and enjoying life. The other has long been dead and his family scattered.

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In the Dot Contest, and may be yours for the effort. Read page 17 in this paper, and act quickly.

All Over the Farm

COW-PEA HAY CROP

THE cow-pea has reached such importance in many parts of the North that its condition during the growing season is given in the Indiana state crop reports, and some other Northern states probably have as large acreage as that state. We are learning that we do not want the earliest varieties for hay. They are too dwarf in character. The variety that will come near to maturity just before frost is the best one for hay, because it gives the largest yield. The trailing varieties are inferior to the bush ones, it may be, as it is more difficult to cut all the vines; but really this appears to me no fault at all, as the ground gets the benefit of all left upon it. South of the latitude of Indianapolis the large Black will ripen seed, and on warm soils a hundred miles north of that city if the crop is planted early. The time for cutting, so far as I now know, is when a few pods and the lower leaves are turning yellow. At this time many pods have peas half grown, while others are younger. The curing is difficult—that is a fact always to be admitted. Some writers advise storing the vines in tight mows when only half cured, the claim being that they will sweat themselves into a well-cured condition. This may be possible in some instances, but the chances are that moldy feed will be the outcome. The safer way is to do the curing in the field. Rain does not damage the hay seriously.

But too much hot sunshine does injury to the hay. It causes the leaves to crumble and to be lost. No fixed time necessary for curing can be named, as much depends upon the weather. The main point to observe is this: Do not let leaves remain exposed to the sunshine until they are brittle. Cut the vines with a mower, and let them lie as long as possible without overcuring the surface-leaves. Then windrow, leaving the vines inverted so that a new lot of leaves is at the surface. Again let the curing go on until the leaves are getting too dry, then divide windrows into bunches of right weight for pitching upon the wagon. This is tedious work. The vines must be parted, and then one end of the section of windrow is turned over upon the other. New surface is again brought to the sun. If it rains, let it rain; it can't be helped. The small cocks or forkfuls dry out quite readily on account of the coarseness of the hay. Invert them if the ground remains wet under them. All this requires five or six days' time, maybe more, but the labor-bill has not been great. Finally the vines are well cured and dry enough for mowing away. If they get too dry there will be waste. If no rain has fallen there is a lot of choice feed that needs little, if any, grain with it; if rain has come, the hay is darker in color, some leaves have been lost, and yet the stock eat it greedily and thrive upon it.

GIVING LAND A CHANCE

When we seed land to clover or cow-peas it is usually to build up fertility. Cow-peas will grow upon pretty thin land, and when the whole crop should be plowed down as a fertilizer there is a temptation to take it off for feed. Is the land the poorer by reason of having produced the crop? No, I think not, and should rather have land producing peas for forage than to have it idle. But if the land is thin it is deficient in humus, and the fair thing is to let it have all the fertilizing-crop. No matter if the roots have added nitrogen, something more is needed. We know that the serious need of worn soils is the ability to hold moisture during ordinary droughts, and that ability is given by rotted organic matter—humus-making material. If the soil is infertile, or if it has been seeded to peas to build it up for a good crop to follow, then let it have the crop that was grown for it.

With red clover it is somewhat different. The first crop can be cut early, and a good second crop is gotten for fertilizing purposes. There is only the one crop of peas, and the soil that needs all of it should have it. I believe that the crop should be plowed down just as soon as possible after the vines become fairly mature. If the growth is rank the ordinary breaking-plow cannot put them under well. But I prefer a cut-and-cover job of plowing, with a winter cover-crop seeded at once, to the practice of leaving the dead peas on the surface until time of plowing in the spring. They do more good when they rot under the surface. When the vines are made into hay it should be for the reason that the stubble-land is to be harrowed, rolled and seeded down to grass and clover with fall grain or alone.

VALUABLE LAND

I know of some farms in which a few acres are worth much more to the owner than five times that number of acres in the remainder of their tillable land. They are worth more, because they bring in more net profit year after year. Such farms are not uncommon in our Eastern states. These few acres bring a crop every time they are planted. Other land fails to give a good stand of plants, or a drought or a wet season checks growth so that there is little actual profit, while these few acres are pretty reliable. The reason is found in the good physical condition, due to the presence of vegetable matter in that soil. It does not pack nor crust badly, and it holds moisture, because the humus has made it somewhat like a sponge. It may have been stable manure that made the difference between the few extra good acres and the remaining uncertain ones, and we get into the habit of saying that as there is not manure for all the farm, we are helpless; but this moisture-holding material can be gotten from other sources than manure. The manure contains no more than the food fed to the animals contained, and usually not nearly so much. If the crop be one that gathers nitrogen from the air, and is returned evenly by the plow to the land, the humus content is increased rapidly. If the struggling farmer would add only a few acres a year to the number that is sure to be productive almost any year, mat-

ters would mend for him. This can be done, because it is written from experience. It is better to plant less, having the planted land able to pull through a bad season and bring a fair crop when prices are high.

DAVID.

GOOD SEED-CORN

The remarks in your last issue by "David" concerning barren corn-stalks reminds the writer of a fact that may be of interest to many of your readers.

A farmer in Montgomery County, Illinois, with whom I am well acquainted, has been growing corn from the same seed and on the same farm for sixty-two years past. In other words, he selected some seed-corn in the spring of 1840, and since that time he has planted continuously from the product of this seed. He claims the corn is as good to-day as when he began, and believes that if the land were as new and fertile as it was then the yield would be greater. His farm is not the black land of the famous corn belt, and the soil would not be considered rich. It was originally partially timbered.

He has never used any fertilizer except that produced on the farm. He is not what we would call a "scientific" farmer, and has not improved the corn by "breeding" it up.

He does not plant a field or "patch" expressly for seed, neither does he select the seed from the standing corn in the fall, but usually picks it out of the crib during the winter or at planting-time in the spring. The corn is yellow, and has a small red cob. The cobs from a bushel of-shelled corn weigh only about eight and one half pounds.

He has at times planted fields of other varieties, but has always held fast to this kind, which he considers the best for his purpose; namely, feeding to stock. I do not contend that this corn might not have been improved by breeding up and by cutting out the barren stalks, but simply recite the fact to show what may be done by proper tillage and the careful selection of seed.

S. E. C.

SWEET CIDER

Sweet cider made of good, sound apples properly fined is one of the most wholesome of drinks. It is difficult to get it. There are in this city several places where "pure apple cider" is advertised, but when you get a glass you drink a concoction of brown sugar, tartaric acid, yeast, water and some apple cider. The usual city-grocery price for apple cider is twenty-five cents a gallon year in and year out. Some years, when apples are plentiful, it is possible, by trying many samples, to get good cider, but when apples are at all scarce the twenty-five-cent cider is pretty weak, sour and poor. Hard cider is not to be recommended, of course. This is the point where the juice passes from the vinous fermentation, caused by the sugar in the apple, to the formation of acetic acid. In this stage alcohol is developed, and the product is really neither cider nor vinegar.

The liberal use of good cider is said to be a most effective preventive of malaria, and the drink is a specific for dysentery. Cider is best made from apples not only sound, but ripe. Early windfalls can be converted profitably into vinegar, but only good, ripe, selected apples make first-class cider. There is all the difference in the world between cider made from this class of fruit and that made from all sorts—good apples, windfalls, half-rotten apples and rotten apples.

GUY E. MITCHELL.

KEEP THE FARM NEAT

May I not put in a plea for neatness on the farm? What do I mean by this? I will tell you. Some things may be proved by contrasts. The other day I passed a farm where the house and barn stood on opposite sides of the road. The house had a careless look, as if the occupants were very busy people, and had little time to spend on personal appearance, either of themselves or their home. But the barn was the worst place to see. The door stood open, and I could see everything strung around all over the floor and sides of the building. And about the yard outside—why, it was simply dreadful. Turned up by the side of the fence were a mower, a reaper, two or three bob-sleds, a harrow, an old wagon, a hay-rigging, and no end of plank boards tossed around as if there had been a cyclone in the neighborhood. It was enough to make one really sick to look at it.

Less than half a mile away was another farm, presenting a decided contrast. Here the house and barn had a trim look. Things seemed to be all in place, and there were no sleds, old wagons or farm machinery out of doors rotting down. This was a neat farm. Who would not like to have his own place like it? We all may. This I plead for.

E. L. VINCENT.

SILOS

There has been great interest in silo-building this year. Thousands of new silos are being put up, and many farmers who have long argued against feeding silage will try it next winter. Many small silos are being built, too, on farms where there are already several larger ones. The smaller ones are to be used for summer feeding, so that next summer the cattle can be "pastured from a tub." This means that many old pastures have been broken up and planted to corn. It is one result of the high prices for corn. Farmers have been driven to new methods of obtaining stock-food from the farm, and the silo has come to stay.—Rural New-Yorker.

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In the Field

FALL PLOWING

ON SOILS of a refractory nature the benefits of fall plowing are inestimable. Gumbo and alkali lands are more easily managed in this way than any other. The soil is loosened and subjected to the pulverizing influence of the winter frosts. Barn-yard fertilizers may be thoroughly incorporated in the soil by turning under in the fall and disking the following spring. The work of stirring the soil may be done at leisure, thus doing away with some of the hurry and rush of spring work, and at the same time putting the ground in the best possible condition for the reception of early crops. The use of the disk to finish the preparation of the seed-bed the following spring is, however, imperative. The early truck-patch, the alfalfa-meadow, and all odd corners requiring much time and patience in preparing, should all be plowed in the fall.

But while the practice of fall plowing is practicable and beneficial in some locations and soils, there are instances where it would be detrimental to employ it. A neighbor had a field which had been stirred the preceding fall or winter, and which was very loose and fine last spring. Owing to the extremely dry weather in this section during March and April the ground was in first-class condition for being carried by high winds, when a dust-storm came up and my neighbor's farm seemed almost literally to "take wings and fly away." The soil was naturally porous and needed no fall preparation. Land on the hillsides, particularly if of a sandy or porous nature, is liable to wash badly if plowed before spring. Even then such land is better in pasture than in cultivated crops.

Fall plowing is practicable on heavy soils and level fields, also on small areas where the danger of washing is not great. Every acre that can be plowed before the spring work begins should be so prepared, as the ground will then be in splendid condition for early planting.

C. B. BARRETT.

WORKING UP OR DOWN?

Thousands of farmers would like to be better agriculturists than they are. They know they are wasting time, strength and life itself in the process of farming. They get through one year just where they began it, so far as knowledge, money and practical experience are concerned. They notice that some about them are outstripping them in the race, and they wonder how it is done. They watch, and finally conclude that their successful neighbors were born

lucky. They themselves must have been born unlucky, or they would succeed as well as others.

This is a bad way for any man to get into. The man who comes to such a conclusion as we have indicated is to be pitied. There is indeed a gloomy outlook ahead for him.

The fact is, there are no lucky men in this world. There is, indeed, no such thing as luck. The world has no meaning when used as most of us use it. But why does one man win where another would fail absolutely? Simply because the one thinks, plans, acts. It is one thing to have a good farm, well fitted with good machinery, stock, and otherwise well equipped. It is quite another to be able to carry on that farm so that as the years roll by one may see that he is making progress in the right direction. It used to be said that any one can be a farmer. It is not true, and never was. To be a farmer in any right sense one must be a close student not only of soils, cattle, grains, grasses, weather and markets, but at the same time possess the quality of mind which enables him to put what he knows into practice.

Hundreds of our farmers are failing because they can not, or do not, think enough. They are content to slip along, satisfied if they make a living. Thought makes the good farmer. The more ideas a man has, and the more completely he puts his thoughts into operation, the greater will be his success.

Take it in the matter of raising corn. A man must make up his mind what he will do with his crop after it has been put into the ground. It is not enough to plant it well. It must be cared for all the way through. So in dairying. A man must love the work. He must put himself into it. He must think about it, study it and put his ideas into practice. This is why some are working up and some working down. Some men's cattle are a great deal finer and more profitable than they were ten years ago. Some have made absolutely no progress in this direction. It is interesting to note this difference, but at the same time painful. I believe it is the duty of every good farmer to do all he can to arouse his unprogressive neighbor so far as possible to a sense of the possibilities before him. How? By talking with him and encouraging him to reach out and up; by getting him to attend the meetings of progressive farmers, and by urging him to take one or more live farm papers. The man who begins to read, and think about what he reads, is in a hopeful way.

It should be the ambition of every one of us to end each year so far as possible in advance of our starting-point. Always camping on the same ground never wins a great campaign. We must get out of our tents, push our way ahead, plant our feet on new territory. To-morrow ought to be a better day than to-day, and far in advance of yesterday.

E. L. VINCENT.

Correspondence and Comment

FROM WISCONSIN.—So far this has been more of a mining and lumbering region than a farming country, but in tracts where the timber is cut people are beginning to realize farming can be carried on with profit. Our soil is a sandy loam, but near the shore of Lake Superior the soil is mixed with clay, and it yields abundant crops of clover, timothy and all kinds of vegetables. Our potatoes are far above those brought from the older farming countries, especially in regard to quality, and they generally bring ten cents more a bushel in the stores around here. As for small grain, oats is grown to a considerable extent, also winter rye and wheat. Strawberries, raspberries, blackberries, gooseberries and currants do very well, also the hardier kinds of apples; but in my opinion our land is best adapted to dairying and stock-raising, on account of our unexcelled pasturage and the abundance of rivers and creeks with pure spring-water. Land is now worth five dollars an acre upward, according to location, but the price is advancing rapidly on account of the influx of settlers. We have four railroads running through Ashland County.

C. J. E.

Ashland, Ashland County, Wis.

FROM FLORIDA—CASSAVA AND VELVET BEANS.—Previous to the "Great Freeze"—that is, 1894-95—nearly all Florida north of latitude twenty-eight degrees was devoted to the production of oranges. We sold oranges that found a market all over the North. We bought almost every necessity of life with the proceeds. It was strictly a life of ease. Our wants were few, but the markets were far apart, and the transportation companies took a heavy toll. Any country that can prosper under such methods must possess unbounded wealth. The "Great Freeze" came; it killed ninety-five per cent of the orange-trees of the state. What about a "life of ease" now? Orange-grove owners were ruined—or thought they were. Some plucky ones went to work to restore the groves. Others sold out for less than the buildings cost. Many left the state forever. Many more would have done so if they could.

We have discovered that we have other resources that are more valuable than orange groves. North of latitude twenty-eight degrees the growing of citrus fruits is now considered too risky, and people are now devoting time to stock-raising. It has been but a few years since the discovery that Florida is destined to become one of the greatest stock-raising states of the Union. The growing of cassava with the velvet bean and other new forage-plants has made it possible to make beef of the best quality at far less cost than in any other state. Our soils and climate are specially suited to such products.

The yield on our high pine-lands is six to twelve tons of cassava an acre. Owing to the nature of our soils, it is easily

cultivated. It is easily harvested by lifting the plant and roots bodily from the ground. The roots keep in the ground where grown until used. The dry matter of the root contains 1.94 per cent ash, 1.27 per cent oil, 17.43 per cent sugar, 4.03 per cent fiber, 71.85 per cent starch, and 3.47 per cent nitrogen. The high per cent of sugar and starch show the value of this plant as food for man or beast.

The discovery of the value of the velvet bean for stock-feeding and as a soil-renovator, since 1895, is revolutionizing methods of farming throughout Florida. The yield an acre is from five to twelve tons of green forage on our high pine-land. It is the most wonderful "nitrogen-gatherer" and soil-renovator of all plants known. All stock are exceedingly fond of the forage. The plant is also very productive of beans that are so rich in nitrogen and protein that it makes a perfectly balanced ration fed with cassava. The crop is not harvested, but we turn the stock in the field when ready.

One of the great packing firms of Chicago has realized the possibilities of stock-raising, and has already purchased thousands of acres of land in Florida. Not much of Florida is over two hundred feet above tide-water. There is a ridge running northwest and southeast about four miles east of Bartow that has an elevation of two hundred and fifty feet.

The velvet beans are planted between rows of cassava, and both make splendid crops of feed.

The state experiment station recently gave out the following summary of results in feeding several lots of pigs:

"The total cost of the amount of food consumed during the seventy-five-day period was \$5.52 for the cassava pigs, and \$18.07 for the corn-fed lot. This amount divided by the gain in weight for each lot shows that the actual cost a one hundred pounds of the meat made from the food consumed was \$1.04 for the cassava, and \$3.06 for the corn-fed pigs."

If velvet beans and cassava had been used together, to form a "balanced ration," I believe that the cost of production could have been further reduced, and with an improvement of the meat. South of latitude twenty-eight degrees cassava becomes a perennial. Although it loses its leaves during winter, it will bud out again and make a great growth. The more open and the looser the soil, the better it suits cassava. Some roots attain a length of six feet or more. If the soil is firm they cannot be withdrawn without breaking. The stalk which grows above ground furnishes a support for bean-vines when beans are planted between the rows of cassava. This is the best combination ever invented—each crop assists the other. But the beans must be harvested by hand, and the vines left on the soil to plow under after the cassava is harvested. We can produce a great variety of crops profitably that we did not consider possible to grow at all before the "Great Freeze." Florida is a great state, with ample and seasonable rainfall and an incomparable climate.

Bartow, Polk County, Fla.

D. C. G.

ENTER THE DOT CONTEST

and you may win hundreds of dollars for a few minutes' work. See page 17 of this paper.

Gardening

By T. GREINER

DANGEROUS SURROUNDINGS.—N. C. B. says his bean-patch so seriously damaged by cutworms is located in the corner of a clover-field, and I suppose immediately adjoining it. He is in doubt whether such location is right and safe. To tell the truth, I am afraid of grassy margins, of herbaceous growths of any kind, may this be rhubarb or clover or other plants, close to the vegetable-garden, for here the cutworm is apt to breed and to start out again for mischief to the adjoining cultivated ground. In short, continued close cropping, fall plowing and the practice of keeping the margins of the garden free from any herbaceous growth right along are the surest means of preventing not only cutworm depredations, but also those of wire-worms and probably other insect-enemies.

FAVORITE FRUITS FOR BIRDS.—The Juneberry and the mulberry are in great favor with birds, which seem to leave everything else that is edible for these two. Birds hardly ever leave us a fair picking of Juneberries; what they have left for us on the Juneberry-bushes, however, is a plentiful supply of San Jose scale. I had to cut the bushes down to the ground last year, in order to get rid of the scale. For a while I seem to have succeeded, for the new sprouts, which have furnished a small crop of berries this season, are as yet free from scale. I expect them to become speedily infected again unless treated freely with a scale-killing wash. This will be applied during winter. The mulberry-trees do not appear to be so subject to the infection, although birds have been abundant in them during every fruiting-season.

VETCH AS COVER-CROP FOR ORCHARDS.—I have sown a peck of hairy vetch seed in part of my apple orchard. The seed sprouted promptly, and the plants look promising. I know that this vetch makes one of the very best orchard cover-crops, and the only drawback thus far is the rather high price of the seed. I think it is offered for about six dollars a bushel. In Germany we used to feed vetch-seeds to our pigeons and chickens, and the price there surely cannot be more than a fraction of the price asked here for it. Seed is not difficult to raise, and some of our people might find in this crop a chance for good profits. The plant is rapidly coming into favor with American orchardists. If left on the ground to decay it will seed itself. On the whole I believe it deserves the attention of every tree-fruit grower. It makes excellent hay and pasture, too.

STRAWBERRY-RUNNERS.—My favorite way of growing strawberries is in matted rows. This is the business method. I set my plants far enough apart so that I get just plants enough for the runners to make a good matted row, with a good big patch left between each two rows. This avoids the necessity of cutting out many runners. In small gardens I sometimes set plants closer together, say fifteen to eighteen inches apart in the rows, and the rows two feet apart. In that case the plants must be kept down to single stools. This requires very close attention as to the removal of the runners. The plants will run, usually with great persistence, and the runners must be removed just as persistently to avoid trouble. These single plants give a superior lot of berries, especially berries of large size. But for quantity the matted row is far ahead, and we get good big berries, too. Indeed, we need not aim for anything much larger nor better than we get from our Brandywines.

Fruit-Growing

By S. B. GREEN

PRUNING THE ARBOR-VITÆ.—J. M. H., Berea, Ohio. The common arbor-vitæ may be pruned at almost any time, but I think the most favorable time is early in June.

APPLE VARIETIES.—E. W. McF., West Salem, Ohio. The Black Ben Davis, Champion and Delicious are varieties of apples that have not been tested to any considerable extent, if at all, in Ohio. The Jonathan is a New York apple, and has been grown for many years in parts of Ohio, where it is regarded as a standard sort.

PROPAGATING DEWBERRIES.—C. S. Y., Fulton, Mont. The common dewberries are most easily propagated by burying the tips of the runners at this season of the year in much the same way as raspberries are layered. Almost any part of the new growth of the cane, if covered with two to four inches of moist soil, will soon emit roots, and these plants will be large enough for setting out the following spring.

TRAINING GRAPE-VINES.—E. E. E., Frederickstown, Ohio. If you wish to train grape-vines to stakes you should first encourage the growth of two strong canes, which should be twined around the stake; when they reach the top of the stake they should be pinched, and occasionally the side shoots trimmed in summer, so that the spurs will produce fruit near to the old wood. If not pinched the spurs will have to be left very long in pruning, in order to get fruit-buds. Where vines grow on buildings it is not so important to practise summer pinching; at the same time, it is generally desirable to do so if fruit is anything of an object.

BLIGHT.—E. J. P., Great Bend, Kan. Pear and apple trees blight because of the presence of a fungous disease which attacks the new growth. There is no satisfactory remedy for this disease, and the best way to avoid it is by planting those varieties that are most exempt from its ravages. The best treatment for trees that are infested with blight is to cut and remove the diseased portion as soon as may be. It is often impracticable to do this in large orchards, but it is a desirable treatment. I am inclined to think that your Jeanette apples rot on the tree probably from what is known as bitter-rot, which has been especially troublesome throughout your section for the last few years. Experiments in spraying with Bordeaux mixture have shown that this disease can be held in check by the use of this material. I do not think that apple-trees can be cultivated too much in the early part of the season. Up to the first of August the soil should be kept thoroughly cultivated, so as to save moisture and encourage growth on the trees. After that I think it doubtful if much cultivation is desirable except in very dry seasons, when it should be practised to save the moisture in the soil. Trees that are growing on very rich soil and making a very rapid growth are rather more inclined to blight than those that are growing in sod; but, on the other hand, there are very few orchards that are in sod that have proven profitable in your section. As a special book on fruit-growing which I think would greatly interest and benefit you I would suggest that you obtain "Principles of Fruit-Growing," by L. H. Bailey. It is sent out by the MacMillan Publishing Company, New York City, and I think the price is one dollar.

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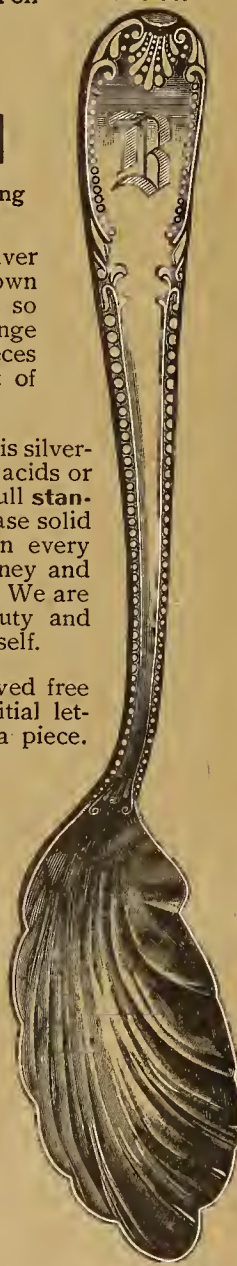
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No. 66.



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Pat. May 21, 1901.

Bluffton, Ohio

Live Stock and Dairy

MOHAIR AND ANGORAS

IT is not an idle dream to picture a rapidly increasing use of mohair by American manufacturers, for we must remember we are considering a product of which it can be said there is no other fiber more beautiful than mohair, not excepting silk. The natural luster in the mohair on the goat's back is never absent in whatever manufactured form it takes or however long it may be used. From the manufacturer's point of view mohair goods have advantages over wool or cotton material, as they will not mildew, nor shrink when wet. For durability they have no equal in the fiber world, and in some forms mohair seems to be indestructible by ordinary usage. That the American people will be slow to appreciate these qualities when once understood is assuming far too much in this late day and age. Assure the manufacturers of more mohair, and avenues for its use will develop as rapidly as we of the mountains can shear it and send it to them.

THE ANGORA GOAT is a particularly robust animal, and in fact is credited with being the most healthy of all live stock. They are very seldom, if ever, infected by scab, require no dipping, and are far more prolific, more easily handled and more cheaply kept than sheep. On these three points the personal experience of S. S. Brannin, a pioneer in the industry in Montana, and the owner of a large number of Angoras, has been that one-hundred-per-cent increase may be safely relied upon, as from three hundred and eighty-six nannies he last year raised four hundred strong, healthy kids. With a favorable home location they do not require a herder, as they soon learn to come in from the range of their own accord at night. Mr. Brannin seldom has any one with his goats except during the kidding-season.

It is safe to say that but little provision is necessary for feeding Angoras during the winter months throughout the Northwest if opportunity is afforded them to browse on the underbrush, which it is their nature to do and in which they delight. The life of the Angora is two or three times that of sheep—a valuable and important consideration in estimating profit. Mr. Brannin is authority for the statement that does will breed up to twelve to sixteen years of age, and that he has found it practical and profitable to keep the wethers until they are six years old, when they will make good mutton.

The Angora will not injure a range, and horses and cattle feed about with them willingly. They do not have the offensive odor of the common goat, and as has been said by the secretary of the American Angora-Breeders' Association, you may put one hundred Angora does in a barn in midsummer and they will be found as odorless as a white shirt.

CLEAR OFF THE LAND.—They are essentially browsers, and as brush-destroyers are superior to any means known for clearing tracts of land of brush, briars and weeds, and to-day are turning hundreds of acres of worthless brush-lands into good pastures and hay-lands throughout the Eastern and Central states, and are paying well for their board and lodging while they are doing it. On this subject the "American Goat-Breeder," published at 147 Fifth Avenue, Chicago, says in a recent issue: "The United States is rapidly waking up to the value of goats as sure and economical reclaimers of waste lands. Past experience shows that they can be turned into lands covered with underbrush, young trees and weeds, and inside of two years make this land clean and carpeted with fine blue-grass by their continual cropping of the brush and weeds and barking of the trees. Lands unsalable at five dollars an acre have, through the goats' industry, been made worth twenty dollars to twenty-five dollars an acre, and available for fine pasture or general-farming purposes. Any grade of goat, Angora or common, will do this work, but the Angora will yield more through the value of its fleece and quality of its flesh than the common goat will during or after the brush-clearing process."

The work of Angoras in this respect on a farm in Iowa is shown in a series of pictures in the government bulletin on the Angora goat, issued for free distribution by the Bureau of Animal Industry of the Department of Agriculture at Washington. The first shows a tract of brush-land of no value for grazing, or in fact for any purpose. The second, a picture taken twelve months "after goating," shows the brush robbed of bark, leaves and sprouts, and left to die and decay, while the third picture, taken one year later, shows the original brush-land as now being a fine, well-cleared, blue-grass pasture.

That the interest in the Angora industry is a wide-spread one may be known when one is told that within two weeks after the publication of the government bulletin the inquiries made of the Department at Washington on this subject numbered between five hundred and six hundred daily.—John W. Fulton, before the Pacific Northwest Wool-Growers' Association.

RESULTS WHICH PAY

When it came to pass, once upon a time, that I must have more outdoor life than I was getting, a small farm was the place most naturally selected for the purpose. What did I know about farming? Absolutely nothing except what I had acquired by way of observation; yet the manner in which this was turned to account with the stock handled shows that it is a good thing to keep one's eyes open with reference to affairs that he never expects to have anything with which to do. One never knows what kind of a life he may be called upon to live, and real information in any line seldom goes begging during all the days of our earthly existence.

My first purchase was a young cow. She came from the herd of a neighbor, and cost me twenty-five dollars. Although he was not especially rough with his stock, it was left a good deal in the hands of hired men, who were not very patient, and frequently used the milking-stool to enforce obedience. This article is not a very good milk-producer, and seldom sweetens a cow's disposition so that it takes a satisfactory effect in her hind legs. Because of this sort of treatment my cow gave only a moderate quantity of milk, and was slightly inclined to dispute the right of ownership in the supply.

Now, when a youngster I had gone from the city to an uncle's farm in the country, and there I saw him subdue a wild steer, and the way in which he did it made an impression which lasted beyond the days of boyhood. The animal in question had been out in the woods from early spring until November (in the language of the locality had "run the commons"), and probably had not seen a man half a dozen times during this period. When he was rounded up with the others, and brought in to be stabled, he was as wild as a deer and nearly as capable in the way of jumping fences. The manner in which he cleared the high yard fence is still vivid before the mind's eye, as is also the nimbleness which my uncle and his men displayed in giving him the right of way when he turned from the open stable door to break through the cordon that had been formed behind him.

But patience and kindness mixed with a little good sense won. Obeying the same principle which animated the butcher who said that the surest way to his heart when he was hungry lay through a fine beefsteak, a day without food made this steer think very favorably of a wisp of hay. He was then carefully and quietly baited alongside a staid old cow until he entered the stable and was secured. A week of gentle treatment and kind handling changed him, so that he became the model of the yard.

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Live Stock and Dairy

I resolved to apply these methods in the treatment of my cow, although, to be sure, she was moderately well broken to begin with. Nevertheless, the results were really surprising. The creature grew in size far beyond any others in the herd from which she came, as well as taking on flesh, was absolutely safe to handle, and became so famous as a milker that she was sold to a dairyman in two years for sixty-five dollars.

This was certainly a result which paid. My neighbor said it was all because I fussed so much with her, and that he had not the time to do that sort of business with a whole lot of cattle. Doubtless his reason was correct, but I believe he was mistaken as to his not having time to treat his own animals in a similar manner. Indeed, I very much doubt if he employed any of his time which yielded him a better income on the investment, hour for hour, than the minutes I put in at "fussing" with that cow did for me.

The truth is, very little time was so spent. I merely exercised care and gentleness while around her, and gave her an occasional pat or stroke, to teach her that she was not to expect a blow. The results in full were a very largely increased supply of milk during two years, two splendid calves, one of which was sold for twenty dollars when eleven months old, and at last a sale price more than double what had been paid for her, to say nothing of the satisfaction of looking at and having to take care of a splendid animal!

Lest somebody may say that such treatment and results from stock is possible only where there is one cow in the yard, and which, therefore, can be made a pet of, I will say that at this time there were from three to seven head with her during most of the period, and that the change in this animal is not an isolated instance, although the profit realized was somewhat greater than with others, because she was a superior beast.

Another case will show this: In the second spring of my farming experiment an additional cow was wanted, and a wild one from the West was purchased. She had been brought eastward in a drove, and I was warned that a greenhorn had no business with one of those Western cows. But the greenhorn risked it, bought the cow for thirty dollars, and in three months' time had made such a change in her that she was sold in the neighborhood for forty-five dollars.

Of course, good feed and other kinds of care entered into the causes of these improvements in all cases; but my neighbors fed well, too, and bestowed other kinds of attention, so that I give the difference between careless, rough treatment and careful, kind treatment the largest credit for the above results, which paid in every way. I thoroughly believe that this method of handling stock will always pay largely on the time invested, whether one or fifty animals are to be considered.

M. W. FOSHAY.

TESTING MILK

There is just one reason worth considering for testing milk, and that is to find out the amount of butter-fat it contains. The result is, or ought to be, the basis for determining the value of the milk produced by dairymen. And yet, strange as it may seem, with many who have in their hands the matter of testing milk for the public, say in creameries patronized by a number of dairymen, there seems to be an idea that the real purpose of testing milk is to see how far away from the truth they can get and not be caught at it.

Does this mean, then, that the Babcock test can be, and is, juggled with? It does mean just that. It ought to be an impossibility for such a thing to be done. It would be if every man were honest, for as a piece of mechanism the testing-machine is as nearly perfect as anything can be. But here comes in the trouble. For reasons of their own many creamerymen want to favor certain patrons. To do it they read the test higher than the facts warrant. To do this some one else must suffer. This may be kept up for a time, but in the end will be exposed.

I have in mind now a certain creamery which has systematically, so it is asserted and never satisfactorily disputed, given certain advantages in the way of testing milk to men who might be inclined to send their milk to another creamery. This inducement has had the effect of holding these men. Is this right? Every one knows it is not. It is just as much fraud as if the managers of those creameries were running a bucket-shop.

Sometimes the creameryman may be deceived himself. The acid he uses may be too strong or too weak. In the one case it will burn the butter-fat out of the milk, and in the other it will leave some of it in the milk.

How is this to be avoided? How can we be sure we receive just that to which our milk entitles us? This is an important question. Many states have thrown



LILY

Jersey Cow Owned by the Ontario Agricultural College

all possible safeguards about the testing of milk. They have passed laws regulating the bottles used in testing. They have said that acid must be made so and so. And still the imposition goes on.

The best way of which I know to bring unscrupulous creamerymen to their senses is to have our milk tested at the nearest experiment station, and if any marked discrepancy is found we can take our milk away from the man who is deceiving us, and either make it up at home or send it to some creamery which does business honestly.

E. L. VINCENT.

DOLLARS FOR COUNTING

The Dot Contest will be open to all whose letters reach us no later than September 1st, 1902. See page 17 of this paper.

Sharples "Tubular" Dairy Separators.

If no agent will bring you a Sharples Separator we will loan you one for trial **FREE OF COST.**

They give more butter than any other separator, enough to pay big interest on the whole first cost, and they turn much easier, besides being entirely simple, safe and durable. (Former capacity doubled, with less driving power.)

Improvements come fast here. We have been making superior separators for 19 years (longest in America) and are proud of them, but these new "Tubular" do and sell count anything either ourselves or anyone has ever made. Free Book, "Business Dairying," and Catalogue No. 112.

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\$12.98 STEEL RANGE



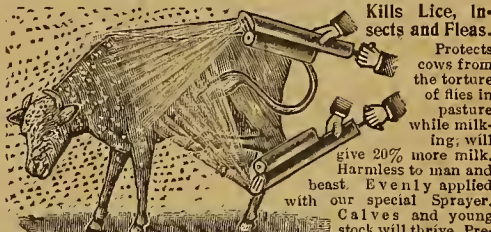
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No. 4111.—GIRLS' GUIMPE. 10 cents. Sizes, 4 to 14 years.

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No. 4184.—HOUSE-JACKET. 10 cents. Sizes, 32 to 40 inches bust. No. 4169.—GIRLS' UMBRELLA DRAWERS. 10 cents. Sizes, 8 to 16 years. No. 4208.—MISSSES' SLOT-SEAM SHIRT-WAIST. 10c. Sizes, 12 to 16 years.

Any one accepting the above offer including a subscription to the Farm and Fireside will be entitled to a count in the Great Dot Contest, providing the count reaches us by September 1st. See Page 17.

Poultry-Raising

By P. H. JACOBS

SLOPPY FOOD

YOUNG chickens drink a good deal of water, but they, in common with all animals, know just how much they need. Mix your corn and dough very dry and crumbly, and let the fowls drink fresh, cool, clean water after they are through eating. If your mess is mixed too thin and sloppy you will force them to swallow more water than they need in order to get their food.

WHOLESOME FOOD

If the hens are kept for profit it is not economical to feed them moldy grain. Only the best to be had should be given laying hens. In proportion to her weight the hen produces more than the cow, and in order to derive that product she must be treated liberally. If the hens are compelled to hunt their food entirely, and receive but little consideration from their owner, they will be unable to give a satisfactory return for the space they occupy on the farm. A hen can be made to lay throughout the most unfavorable season by good treatment.

NON-SITTERS AND FREE RANGE

The best breeds of fowls for free range are the non-sitters. All non-sitters lay eggs with white shells, and will not become broody unless made excessively fat. They are active, and in the summer season, when grass and insects can be obtained, are nearly self-supporting. Among the favorites may be mentioned the Leghorns, which are divided into the Brown, Black, White, Buff and Dominique varieties, differing only in color, and they are hardy and vigorous. They also make good winter layers if given warm quarters, and, being small in size, more of them can be kept in a given space than of the large varieties.

GRASSES FOR POULTRY

In sowing clover for fowls it is desirable to mix the Alsike, red and white clovers, and the kind best adapted to the land will probably take possession in a short time. A variety of grasses is always desirable. Some farmers who give a range to poultry adopt the plan of sowing the seeds of timothy, blue-grass, orchard-grass and the different clovers separately, giving each kind its own space, so as to permit the fowls to select the grasses preferred. It has been demonstrated that each individual will prefer certain grasses, and that the birds will sometimes separate over the entire plot in order to select their preferred kinds.

THE POULTRY-HOUSE

In summer the house should have free and ample ventilation, as the bodies of the birds give off considerable heat. It should be comfortable both summer and winter. Should the space for the house and yard be limited, build the house to front the south or east, with a window in the front side, to admit light and as much of the direct light of the sun as possible. Light not only helps to purify the atmosphere of the poultry-house, but there are many cold, blustering days in winter when fowls do not care to leave the room. On such days they enjoy placing themselves so that they may obtain the direct rays of the sun, admitted through doorway or window, and they do this even when the poultry-house is warm. Should there be a yard having an exposed situation connected with the house, the fence at the north and west should be made as close and tight as possible, so as to form a good wind-break. The droppings should be removed at least twice a week, and the interior thoroughly saturated with kerosene or kerosene emulsion, in order to prevent lice from taking possession. Only a few days are necessary for a poultry-house to be overrun by lice, as the vermin multiply rapidly. At this season, if the hens be allowed to run on the farm, they will often hide out their nests and get well started sitting before being noticed. To avoid this, keep their quarters clean, and they will lay in the poultry-house.

FEEDING INTELLIGENTLY

When eggs are the object, the fowls should be of a breed that excels in the proportion of eggs, and the food should be varied. When fattening a bird for market, after its growth is completed, it may be given more grain than at any other time. The only rule that can be allowed is to feed with an object in view. It may be correct to give a nearly perfect ration for an animal or fowl, but it is not always advisable to use such a ration. It is possible that in some seasons or in some sections the cost of an element in that ration would make it inadvisable to feed such. One must feed to some extent according to circumstances, always keeping in mind that it never pays to feed what will absolutely injure the flock, however cheap it may be. Food values and analyses are well enough, but the farmer who keeps a sharp eye on his flock, and notes the appetite of each of his fowls, will know more about how to feed and what to give than all the theories that may be given. It is not inferred that the tables of feeding-values are useless, or that the efforts of scientists are futile; but fowls differ in characteristics, and the only way to know is by practical observation. Many fowls refuse food and lose appetite simply for the lack of some substance to give the food a pleasant flavor or taste. Animals, like humans, will reject food. Salt is essential to digestion, and it should be provided. The food should be slightly seasoned with it. A small quantity added to the mash will induce the birds to relish it.

DISEASE OF CHICKS.—M. T., Lagrange, Wyo., desires "to know the cause of the feet of young chicks swelling, the toes turning up, and cracks forming. They do not lose appetite, but become stunted." The difficulty is one that frequently occurs with brooder-chicks when the floor of the brooder is too warm, but our correspondent gives no details of management of the chicks, which is a mistake when writing for information.

EGG-PRESERVATIVES.—H. D. W., Americus, Ga., asks "for a preservative for eggs." Experiments show that there is no method that will apply to all eggs, as the period of collecting the eggs, their fertility and the season of the year are factors to be considered. The following rules are considered excellent: 1. Use only eggs from hens not with males. 2. Keep the eggs in a cool place, on racks or in slatted crates. 3. Turn them twice a week. The best method, however, is cold storage.

PROBABLY LICE.—K. K. D., Mobile, Ala., states "that his chickens would begin to droop, and nothing administered helped them at all. The heads seemed to be affected more than anything else; it would appear as if the head were too heavy for the body, and it would hang to the earth, until it finally rested on the ground, and the hen would lie in that condition for two, three, and sometimes more than five, days, taking neither food nor water during that time." The cause may be apoplexy, due to heavy feeding, but at this season the same results occur when fowls are attacked by the large gray lice which work on the heads, necks and under the wings. The best remedies are the advertised lice-killers, which do the work rapidly.

OPPORTUNITY'S OPEN DOOR

invites you to make a count in the Dot Contest, and try for the \$500.00 grand prize. Must be done quickly. Closes September 1st. See page 17 of this paper.

The Grange

By MRS. MARY E. LEE

Farmers are learning in matters legislative the force of Franklin's motto, "If you want anything done, go. If you don't, send."

CONTRAST

A small country church sent over two hundred dollars away for various benevolences, yet the people said they were too poor to have a library, reading-room or ennobling and refining pictures in church, home or school. Few young people go away to school, and none to college. The principal topics of conversation are "He Said," "She Said," "I Said." There isn't a single first-class magazine, and but few good books.

Query—Which is better, that a minister shall be known as a good money-getter or as a good soul-builder? The two are usually divorced. Brothers and sisters, use a little of your money to develop the hearts and brains of your own people. "Love abroad is spite at home."

AN EXCELLENT PROGRAM

We are indebted to J. W. R. Smith, of Jefferson County, Ohio, for an outline of work of Updegraff Grange from July to December. "The Birds" is the July topic. Under this head are papers on "Bird Friends," "Bird Enemies," "Habits and Distinguishing Characteristics of Birds," and a symposium, "My Favorite Bird, and Why," by nine members. "The Ingathering" is the August topic, while September follows with the ever-interesting and practical subject of forestry. "Our Forests," "Effects of Forest Destruction," "A Forest Ramble," and "Practical Forestry" are the subjects discussed.

October's program is varied and of a practical nature. November discusses "Flowers" and "Citizenship." Under the latter are the subjects "Equal Taxation," "Immigration," "Labor," "Transportation," "Public Office," "Legislation."

Few city clubs can present programs more varied or requiring more accurate and extensive knowledge. That the papers will be of sterling worth those who know the members of Updegraff Grange can testify. A country community with such a grange and with such interests will not complain of isolation or lack of interest. 'Tis not the attractions of the city, so much as the lack of them in the farm home, that forces the child to break home ties.

FARMERS IN POLITICS

In a former issue we spoke of several farmer gubernatorial candidates. As the season advances more names will be announced. Pennsylvania has Col. John A. Woodward, institute lecturer and educational worker. In the various conventions farmers are becoming more active. In the Ohio Republican Convention prominent, educated, influential farmers had places of honor. A farmer's candidate for dairy and food commissioner, Hon. Horace Anheney, was nominated. No doubt in the Ohio Democratic Convention, soon to be held, farmers will likewise have a prominent place. In other states farmers are forging to the front. These are not erratic, slipshod farmers, denouncing that which is as wrong; showing their canine teeth whenever capital and wealth are mentioned; calling every successful man a traitor to his country, and every public man a low politician; going into ecstasies of wrath over oppression, real and fancied; weak, vacillating, attaching themselves to this "ism" or that, but they are keen, shrewd business men, with the qualities that win success in any line of human endeavor; successful men of wide business and social experience, who would grace any position of honor to which they are called. All honor to them! Let us honor ourselves by upholding them in all that pertains to the best welfare of our country.

BRING PRODUCER AND CONSUMER TOGETHER

It very often happens in a rural community that a man orders seeds, plants, etc., from a distance when he could have secured them, with advantage to both parties, from a neighbor; or a sheep-buyer will spend hours in travel, when three or four farms away neighbor Smith has concluded to sell his flock.

The grange could bring buyer and seller together in an effective way by hanging two blackboards, labeling one "For Sale or Exchange," and the other "Wanted." Under the appropriate head interested parties could advertise their needs or their surplus products. Such an arrangement, even in a small grange, would prove of vast worth. Mr. Barton would sell sheep, a colt or a cow, and Mr. Dean knows of a man wanting just the animal Barton has for sale. Or perchance Gates wants cabbage or sweet-potato plants, and Jennie Baxter is anxious to dispose of her surplus, in order to buy a coveted book. With infinite pains many a woman has raised a surplus of plants. Too timid to say she has them for sale, she gives them to a chance acquaintance whom she knows is able to buy them, and doubtless would from a gardener. The simple announcement on the blackboard that she has such and such plants for sale would bridge over the difficulty and pave the way to a remunerative business. Try this experiment.

LOCAL PRIDE A BUSINESS ASSET

Six years ago, were you to search from the Atlantic to the Pacific, a duller, deader town than our county-seat, Logan, could not be found. From a prosperous inland manufacturing center of four thousand active souls it had dwindled to a skeleton. All around were thrifty towns, prosperous and jaunty, but seemingly nothing could restore to the little city its pristine vigor and strength. What was to be done? Valuable plants were falling in ruins. Business men got together on street-corners to condole with one another over the dismal outlook. Then some one began to talk of the city's advantages; its ease of access, convenient location, fine water privileges. A board of trade was organized, and capital was offered liberal inducements to invest. The scales had dropped from men's eyes. Wealthy men of the town established manufacturing concerns. Capital from less progressive towns was deflected Loganward. An era of productive activity had set in. And the cause of it all was that men counted the advantages and fostered local pride.

Let country communities note the fact. Stop grumbling, stop traducing your neighbors. Count up your advantages. Proclaim them from the housetop. Organize a board of trade within the grange. Familiarize yourselves with the advantages of your locality. Present your claims to interested parties. Make an effort to draw capital to you. One business enterprise secured paves the way for another. It is easier to get the third, fourth, fifth, yes, the tenth, than the first. 'Tis the parable of the talents repeated in our own time.

Do you live in Arden? Then talk Arden, think Arden, and of its salubrious climate, its natural facilities, the culture and hospitality of its people. In time it will become more than all this, because it believes in itself—is self-respecting—and others will be compelled to it. It is evermore the wonder of small minds, when capital has developed some undreamed-of product, that it should have lain so long undiscovered. Think ye it would elamor at your door when you are engaged with the weighty problems of Jones' or Brown's affairs? Stop talking of your neighbors, and speak of your advantages.

\$500.00 CAN BE MADE

by a few minutes' work. This is the amount of the Grand Prize in the Dot Contest. Closes September 1st. See page 17 of this paper.

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Open hopper. Automatic feed. 10 Days' Free Trial. No pay until you're satisfied. If you don't like it, return at our expense. Isn't this better for you than to pay for a machine you never tried? Cut it free.

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Cured in 15 to 30 Days

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\$1,500.00 Cash Prizes

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THE OLD WAY

Of Treating Stomach Trouble and Indigestion
a Barbarous and Useless One.

We say the *old* way, but really it is the common and usual one at the present time, and many dyspeptics, and physicians as well, consider the first step in attempting to cure indigestion is to diet, either by selecting certain food and rejecting others, or to greatly diminish the quantity of food usually taken.

In other words, the starvation plan is by many supposed to be the first essential in the cure of weak digestion.

The almost certain failure of the starvation cure for stomach trouble has been proven time and again, but still the usual advice, when dyspepsia makes its appearance, is a course of dieting.

All this is radically wrong. It is foolish and unscientific to recommend dieting or starvation to a person suffering from dyspepsia, because indigestion itself *starves* every organ and every nerve and fiber in the body.

What is needed is *abundant nutrition*, not less, and this means plenty of good, wholesome, well-cooked food and some natural digestive to assist the weak stomach to digest it.

This is exactly the purpose for which Stuart's Dyspepsia Tablets are adapted, and this is the way they cure the worst cases of stomach trouble.

The patient eats plenty of wholesome food, and Stuart's Dyspepsia Tablets *digest* it for him.

And this is in accordance with nature and common sense, because in this way the whole system is nourished and the *overworked stomach* rested, because the tablets will digest the food, whether the stomach *works* or *not*. One of Stuart's Dyspepsia Tablets will digest 1,800 grains of meat, eggs and similar food.

Any druggist will tell you that Stuart's Dyspepsia Tablets is a remedy of extraordinary value, and probably is the purest and safest remedy for stomach troubles.

No person suffering from poor digestion and lack of appetite can fail to be immediately and permanently benefited if they would make it a practice to take one or two of Stuart's Dyspepsia Tablets after each meal.

September 30

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Can you count? Then you can enter the great Dot Contest described on Page 17 of this issue of the Farm and Fireside. Cash prizes to the amount of \$1,500.00 given absolutely free. September 1st is last day.

Farmers' Sons Wanted—with knowledge of farm stock and fair education to work in an office; \$60 a month with advancement; steady employment; must be honest and reliable. Branch offices of the association are being established in each state. Apply at once, giving full particulars. The Veterinary Science Ass'n, London, Canada.

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Writers Wanted to do copying at home. ART INSTITUTE, Lima, Ohio.

Around the Fireside

BEAUTY WITHERETH

Oh! royal rose—of many a flower and sweet,
My hands have woven you a garland meet,
And, having woven, lay it at your feet.

Here lilies, here the rosebud, and here, too,
The windflower with her petals drenched in dew,
And daffodillies cool, and violets blue.

Let this fair garland put your pride to death.
To you that bloom to-day, each blossom saith,
"Your beauty, like my beauty, withereth."
—Rufinus. Translated by W. M. Hardinge.

THE QUALITIES OF THE COW-BOY

THE cow-boy is a character that is passing away, and it is well to have a true type of his personality fixed in literature before he leaves us forever. A gentleman who has been a cattleman of the West ever since 1880, in writing an appreciative letter to Miss Frances McElrath, author of "The Rustler," thus describes the mixed qualities of the man on the range:

"In our more cultured state it is hard for us to comprehend the rapid change, the overwhelming predominance of now the good, now the bad, in such a character as the old-time cow-boy. The harshness and the softness, the roughness of the exterior and the sudden revelation of a tenderness of heart that seems incredible, the fixedness of purpose, the determination, independent decision and rapidity of action—all I have found in the rangeman, and in no other type in the whole course of my experience. You, too, have perceived this."

He goes on to testify to the fidelity with which Miss McElrath has drawn her hero, Jim, and speaks of his sudden lapse into outlawry when jilted, as follows:

"Right or wrong, Jim was brave and self-reliant; he asked no favors, and, according to his lights, he acted the man. He fought in the open, was chivalrous, and true to the death to his friends. And that, finally,

"The nobler nature within him stirred
To life at the woman's deed and word,"

was a fit and faithful ending for such a man."

FRESHEST LIGHT FROM EGYPT

Egypt is the treasure-house of archæology. It is also the land of the unexpected. Every year brings with it the record of new discoveries in its soil, each more marvelous and unexpected than the last. Every winter sees an ever-increasing crowd of excavators and explorers of almost every nationality, and none of them returns with empty hands. The monuments of a long series of civilized generations lie buried under its sands; so long, indeed, is the series that in spite of the feverish activity with which the search for antiquities is prosecuted, the supply of them still seems well-nigh inexhaustible.

The culture of Egypt in the time of the first dynasty was, in fact, just as advanced as it was in the time of the fourth. The artistic perfection of many of the objects found by Professor Petrie is simply marvelous. Never at any subsequent period in Egyptian history were the hieroglyphic characters engraved with greater skill and artistic finish than in the reign of King Den, the third successor of Menes. Indeed, the tomb of the king is itself a proof of the advance that had already been made in art and mechanics. It is a stately structure, and the huge slabs of granite with which it was paved show not only what progress had been made in the craft of the quarryman and stone-cutter, but also that the Egyptian engineers had already solved the problem of conveying large masses of stone down the Nile. But we have only to glance at the smaller objects found in the tombs of King Den and his predecessors to assure ourselves that in artistic workmanship the Egyptians of the first dynasty had little to learn from ourselves. Exquisitely carved ivories and vases of alabaster or harder stone testify at once to the taste of the Egyptians of that remote period, and to their mechanical knowledge. The world of the Egyptian first dynasty was one in which culture was already old.

We have learned that, at what was formerly regarded as the very beginning of its history, the culture and civilization of the people were as highly developed as they were at any subsequent period. Indeed, in some respects the art of later Egypt shows a decline. But it was not only art and mechanics that were thus highly advanced. Writing, too, was known and practised quite as much as it was in the Egypt of the fourth dynasty. The hieroglyphic system of writing was already complete, and the characters were used to express letters as well as syllables and ideas. A cursive hand had already been formed out of it, and examples of this "hieratic" mode of writing have been found written in ink. The political and social organization of the country, moreover, was firmly established on the lines with which the later history of Egypt has made us familiar, and Egyptian religion, with its temples and priests, its festivals and its theology, was already in existence. Between the Egypt of the first dynasty and the Egypt of the sixth there was little difference except that the art and architecture of the sixth dynasty show signs of decadence and decay.

A conclusion which the discoveries in Egypt are forcing upon us is the connection which existed between the primitive culture of the Pharaonic Egyptians and that of the Babylonians. By the Pharaonic Egyptians are meant the Egyptians of the monuments, the Egyptians who mummified their dead, who used the hieroglyphic system of writ-

ing, who founded the royal dynasties, and who were acquainted with the use of metals. Egyptian tradition called them the "smiths" who had followed Horus into the valley of the Nile, subduing the aboriginal inhabitants of the country in battle after battle as he pursued his victorious course from the south to the north. Excavation has made it clear that at the bottom of this tradition there is substantial truth. The older population of Egypt was that represented in the so-called prehistoric cemeteries. It was a population which was not yet acquainted with metals when the Pharaonic Egyptians first appeared among it; it still employed weapons and tools of stone, in the manufacture of which it had reached a high degree of perfection. It was, moreover, a pastoral population; it lived in the desert on the outskirts of the swamps and jungle, which still made access to the Nile dangerous, if not impossible. The bodies of its dead were not mummified; they were first laid on the surface of the soil, and then when the flesh had been devoured by birds or beasts of prey the bones were collected, and arranged, so far as was possible, in a crouching position in the grave. The crouching position, in fact, in which the knees were drawn up toward the chin, was that in which primitive man usually sleeps.

This neolithic population of primeval Egypt was subjugated by the Pharaonic Egyptians. Their language, with its Semitic elements, shows that they must have come from Asia. So, too, does the knowledge of copper, which they brought with them. But it is the objects found in their tombs that indicate the particular part of Asia from which they migrated. The Egypt of Menes and his immediate successors made use of the same seal-cylinder as that which characterized Babylonia, and, as in Babylonia also, clay was employed as a writing-material. Now, in Babylonia this was natural and obvious. There was no stone there, and consequently every pebble was of value. The stone-cutter's art first developed in the Babylonian plain, where the pebbles were cut into the shape of cylinders and engraved with figures and written characters. Clay, too, was literally under the feet of every one, and seemed of itself to suggest that the cylinder should be rolled over it, leaving on its surface a permanent impression of the engraved characters of the seal. In Egypt, however, the contrary of all this held good. There stone was plentiful, and clay, such as could be used for retaining an impression, was scarce. There was no inducement to cut the pebbles which covered the face of the desert into a peculiar form and employ them in the Babylonian manner, and only in a few places could clay be found which was not loamy and mixed with sand. It is only from Babylonia that the use of the seal-cylinder could have originally come.

There are other facts besides which point in the same direction and lead to the belief that the culture of Pharaonic Egypt was derived from the banks of the Euphrates. The Pharaonic Egyptians seem to have crossed the straits of Babel-Mandeb, carrying with them the weapons of metal with which they subsequently overcame the aboriginal inhabitants of the Nile Valley, and to have reached the Nile itself in the neighborhood of El-Kab and Edfer. That they must have passed along the southern coast of Arabia was first pointed out by Doctor Schweinfurth. Certain of the gods of Egypt were said to have come from thence, like incense that was burned in their honor, and several of the sacred trees were natives of Yemen, but not of Egypt, where they became extinct as soon as they were deprived of the protection of religion.

Neither in Egypt nor in Babylonia has any beginning of civilization been found. As far back as archæology can carry us man is already civilized, building cities and temples, carving hard stone into artistic form, and even employing a system of pictorial writing. And of Egypt it may be said that the older the culture, the more perfect it is found to be.

Abydos was the burial-place of the Pharaohs of the first two dynasties. It was the cemetery of This, the capital of a kingdom that had arisen in the fertile plain that here borders the Nile. Generations of the earlier inhabitants of the district had already been interred there. Wherever we go, on either side of the river in the neighborhood of Girga, the modern successor of This, the graves of the prehistoric population are to be found. But it must be remembered that although the earliest graves of this aboriginal population go back to an age long before that of Menes, there are other graves which are not only contemporary with him, but even with the kings of the third and fourth dynasties. It was long before the two races—the conquered natives and the Asiatic conquerors—amalgamated into one and became the Egyptian people of history. And so it comes about that there are prehistoric cemeteries in Egypt which are coeval with the earlier historic cemeteries—cemeteries in which the bodies are not yet mummified, where the tools and weapons are of stone, and the art of writing is unknown. They represent the graves of the prehistoric population which lived in the valley of the Nile ages before the arrival of the Asiatic stranger, and who eventually became the serfs and subjects of the Pharaonic Egyptians of history, embanking for them the waters of the Nile, cultivating the fields, and erecting the monuments which commemorated the power and mechanical knowledge of the ruling race. Like all nations that have influenced the world, the Egyptians were a mixed people, though it is only now that the extent and nature of the mixture is beginning to be known.—Prof. A. H. Sayce, in The Homiletic Review.

DO NOT WAIT—\$1500.00 IN CASH PRIZES

Of which you may win a nice share, providing your mail reaches us not later than September 1st. See page 17 of this paper.

The Housewife

WEED FIRES

Now every little garden holds a haze
That tells of longer nights and shorter days;
Handfuls of weeds and outcast garden folk
Yield up their lives and pass away in smoke.
The leaves of dandelions, deeply notched,
Burn with the thistle's purple plumes, unwatched
Of any eyes that loved them yesterday;
They light a sudden flare, and pass away.

The small fires whimper softly as they burn;
They murmur at the hand that will not turn
Back on the dial and bring to them again
June's turquoise skies and April's diamond rain.
"Alas!" the weeds are crying, as they smolder,
"We are grown wiser with our growing older;
We know what summer is—but ah! we buy
Knowledge too dear; we know, because we die."
—Nora Hooper, in the Westminster Gazette.

NECESSARIES OF BABY'S LAYETTE

THESE little articles are the delight of women's fingers to contrive for the advent of the little stranger, be it one of her own or a neighbor's. A tenderness comes into the heart of every one at the sight of a helpless little one.

The first little sack is of soft piqué trimmed with beading, through which a pink ribbon is drawn.



The kimono is made of white nun's-veiling, faced with soft pale blue India silk.

The shawl sack is a very dainty affair, made of split zephyr, and is of sufficient warmth to wear when out riding.

Another affair for a boy baby is a tight-fitting Jersey, knit of white wools in garter-knitting.

Worn with this is a close-fitting cap of silk, with silk strings hemstitched on the ends, and pinned to the cap with tiny gold pins.

A pretty bib, made of a finely embroidered handkerchief, is a neat affair, which can readily be seen by the illustration.

A veil, made of fine net, edged with Valenciennes lace, is often a necessary protection to the baby's face.

An apron of eiderdown, bound with ribbon, to lay upon the mother's lap when bathing the child, is nice to have, as baby can be rolled up in it to keep him warm if he becomes fretful.

W. D. M.

SAVING STEPS

"Aunt Susan, I want to have a little talk with you before you go; that is, Uncle says I must. I wanted to surprise you, but he won't let me.

"You see, I've been planning to fix things all up while you're gone. I'm going to repaper the north parlor, and put down some pretty matting. That will be the parlor, or best room, or whatever you wish to call it. Then the south parlor shall be turned into a dining-room. It isn't just as convenient as I wish, because the pantry is on the other side of the kitchen; but if we put shelves in there for dishes it will do very

well, and I know it will be such a comfort to you not to have to eat in the kitchen.

"Over in the southwest corner of the kitchen is to be a little trap-door, which when you open it will show you a big funnel opening into a drain, which will carry out all your slops without you setting your foot outdoors.

"In the northeast corner of the pantry you shall have a pump. This going outside for water seems to me perfectly barbarous, especially when you insist on carrying a large part of it yourself.

"Now, say you like my plan, and will agree to it all."

Aunt Susan smoothed out the creases she had made in her white apron, and said, "It's real kind of you, Dorothy, to think of fixin' things up for me; but you mustn't mind my sayin' I'm afraid your plan will make me too many extry steps. I'm gettin' to be an old woman, an' every step counts."

"Why, Aunt Susan," cried Dorothy, "I was planning to save steps for you! That pump in the pantry, and the slop-drain under the floor, would save you more steps than you can think!"

"Maybe," said Aunt Susan. "I wasn't thinkin' of those

steps. They're my play, you know, my outdoor exercise, like some folkses' golf an' bicyclin'. I get up in the mornin' just longin' for a glimpse of the new world, an' I catch up the water-pail an' hurry out to the pump. Perhaps you haven't noticed the blush-rose by the pump, Dorothy. It pays me over an' over for all the pails of water I bring, an' I have little fancies about it that make life easier to live after I've visited it in the mornin'.

"Then the slops. You know the pail on the oil-cloth in the entry. I put them in there, an' then I have a little play to myself when I carry them out. They're not just slops then. They go to water thirsty plants in dry times, an' anyway they take me outdoors a few times a day. We house-keepers have to look out, Dorothy, or we don't get out as much as we should. It seems to me your funnel drain would get dirty after awhile, an' not be pleasant to have under the house. The pail can be scrubbed real often, you know.

"The steps I was thinkin' of that would be too hard was those to the dinin'-room. I've lived here thirty years, Dorothy, an' I've always had my meals in the kitchen. I don't suppose it is elegant; but we've always found it comfortable. My kitchen's such a bright, cheerful place. There's only one thing in it that anybody could object to seein' in a dinin'-room, an' that's the cook-stove. I've sometimes thought it would be nice to have a pretty screen to put around that, with silkoline on one side and asbestos on the other. That would look some prettier than the stove, an' it would keep the people that sit next the stove from bein' too warm, too. Of course, I don't use my range in the hot weather. There's a nice gasolene-stove you may have noticed out in the back-porch closet that does duty when it's hot."

Just then Uncle Nathan came in. "Well, Dorothy," he said, "you an' mother got this fixin'-up business settled? How much money you goin' to need?"

"About five dollars, Uncle," answered Dorothy, meekly. "I believe there's nothing needed but a screen."

VELMA V. BEEBE.

MOSQUITO-BITES

Put some powdered alum in a small bottle (I like a rather open-mouthed one, in which to dip my fingers), fill it with water (it will not dissolve more than a certain strength), and put over the skin a slight moistening of the solution in all exposed parts—around the wrists and neck, face, and roots of hair-partings. I never found it inconvenient, except perhaps a slightly more tanned skin, but not one sting have I had since. And it has this benefit, that it has no scent to annoy other people, like carbolic. I carried a small vial in my hand-bag when last traveling, and with absolute success.

REGULARITY OF LIVING

There is nothing so conducive to good health as regularity in all our ways of living.

The human body is a perfect clock, wound up to last just so many years. The pendulum, the heart, never stops until something goes wrong. The wonder is that with all the dissipations, with all the irregular things we do, with all the conglomerate mess of stuff put into the human stomach, and called food—with all this that any live to grow up.

Animals are always fed the same kind of food generation after generation, no change being made, but with people it must be an unending variety. Each kind of animal must be provided with food peculiar to its kind, and care has to be taken that they receive it; but with people every new thing sprung upon the market must be tried.

A fasting for a few days is very beneficial. We all eat too much, and many eat too fast. Parents are not careful

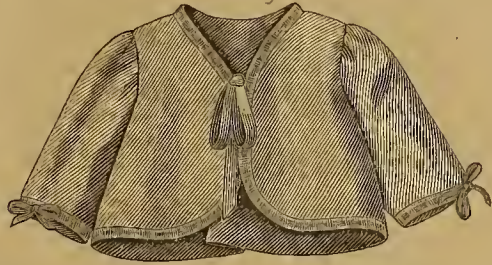


enough to teach a little child to properly chew its food before swallowing it. This if learned early becomes a habit, which remains with the child. Other habits of regularity should also be formed in childhood. Punctuality and obedience are never learned after one grows up, and the many ills that result from the absence of these two are direful in the extreme. If you are your child's teacher try to make these habits of regularity a foundation for all of after-life.

W. D. M.

YOU CAN MAKE MONEY

almost as fast as you can count, by entering the Dot Contest. Closes September 1st. Act quickly. See page 17 of this paper.



THE ORGAN A NECESSITY TO THE HOME LIFE

With the better conditions surrounding home and individual life in this country there has developed a demand for improvement in music in the household. This most pleasing of the arts is something in which an entire family may find a common interest and recreation. There are few who have not some ear for music. There is no other agreeable form or refined amusement which returns so much for the cost. In music there is entertainment and occupation for the leisure hours, either for the individual or for the group of family or friends. Music is a need for the rest of the mind disturbed by the exactions and annoyances of the day, a help in social intercourse and a medium in harmoniously grouping for the time people of otherwise dissimilar tastes. In recognition of this demand, and it is a growing one among the people, the Farrand Organ Company of Detroit, Michigan, has for several years devoted its entire time and attention and the complete facilities of its extensive factory to the perfecting of an Organ for home use. So thoroughly has the Farrand Organ Company gone into this work, and so complete has been its success, that the manufacture of the Organ in all other forms has been given up by the Company in favor of the instrument for the home. The progress of the Farrand Organ Company in its chosen line has been so great that it is to-day recognized as by far the leading house in the world in the manufacture of Organs for the household, and its catalogue should be carefully studied before the purchase of an instrument.

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SEE PAGE 17 OF THIS PAPER

DICK ONSLOW AMONG THE INDIANS

BY WILLIAM H. G. KINGSTON
A Prince Among Story-Writers

This is the title of a well-written and thrilling story of Life and Adventures with the American Indians of a Half Century ago, based on the trip of a party of border people across the Western plains for the California gold-fields.

IN TRUE AND REALISTIC FASHION THE BOOK RELATES MANY HAIR-BREADTH ESCAPES, TELLING HOW SOME OF THE PARTY ARE



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Of Exciting Escapes.
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Of Furious Wars Among the Tribes.
An Indian Chief's Daughter Rescues one Man from the Stake.
Another is made Medicine-man for the tribe and is Offered Two Indian Princesses for Wives.
Saving the Life of a Young Chief.
Fights with Terrible Grizzly Bears.
Attacks by Ravenous Wolves.
Conflicts with Poisonous Rattlesnakes.
Battling with Starvation.
Almost Overcome by the Deadly Prairie-fire.

TO THE PEOPLE OF THIS PRESENT GENERATION THE AMERICAN INDIAN IS SCARCELY MORE THAN A TRADITION

a myth, to be found only in history. The remnants of the tribes now to be found in isolated spots of the great West are but poor specimens of the Indian braves who once possessed this land.

To the historian it seems but yesterday that the heroic deeds were wrought which gave name and fame to the great warrior chiefs, as King Philip, who led the Narragansett and other tribes in the bloody war which bears his name; Powhatan, the powerful Virginia sachem, and father of the beautiful Pocahontas, who saved the life of Captain John Smith; Pontiac, leader of the Ottawas and Pottawattamies, remarkable for his great ability and good judgment; Logan, the eloquent Mingo chief of the Iroquois nation, humane and friendly to the whites; Tecumseh, the Shawnee warrior, brave but kind-hearted, born in 1768, near Springfield, Ohio; Osceola, the plotting chief of the powerful Seminoles; Black Hawk, the great Pottawattamie chieftain; and the more recent Sioux chief, Sitting Bull, crafty and treacherous, but able withal.

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Rural Contrasts

By WALTER E. ANDREWS

FARMER JONES, of the Middle-West 50's, was a decent sort of a fellow, but he lived hard, fought hard and worked hard.

His rude log cabin was gusty and frosty, cramped, inconvenient and bare of luxuries, yet to him it was a palace filled with comforts. It required lively scratching—with a yoke of oxen to help—to provide enough fuel for the huge open fireplace. Plenty of fuel was to be had, but it seemed as if this hungry fire-maw was insatiable; likewise the little human maws that swarmed in healthful hungriness beneath the pioneer roof-tree. Life in those days, take it altogether, was a primitive scratching-match, and yet, notwithstanding, Farmer Jones would have scorned to exchange places with a king.

It was a constant, unlovely struggle between brawn and Bruin, cold and comfort, ingenuity and Indians. But Jones was a born pioneer, and he persisted. He did not know when he was beaten, or if he did know he simply grabbed his ax or his hoe and whacked and scratched away all the harder. The elements blustered and spit lightning, drought and ice; savage beasts and more savage men snapped and whooped discouragement and defiance, but without avail. Farmer Jones calmly turned his quid in his lean jaws, took a fresh hitch in his leather belt—and built a corn-crib or a smoke-house or some other little improvement to show his contempt for opposition. In time a well-sweep was added to the farm equipment.

"My! ain't it a luxury!" exclaimed Aunt Mandy, as she "h'isted up" a bucketful of water with the contrivance.

"Beats goin' to the crick fer water!" said the admiring boys.

"Yep, it'll do purty decent," complacently admitted Farmer Jones, architect and builder.

The girls perked up their noses and felt themselves suddenly uplifted to a higher social plane. How those Smith girls would stare! And serve 'em right, too, for being so "stuck up" over their ma's new rag carpet.

So, little by little, year by year, the progressive fight went bravely on. Frontier trails gave place to corduroy roads, and then to metal rails. White school-houses shot up here and there in the forest like mushrooms in a night. Neighbors flocked in with the crows. Improvements grew, and grew again, while rural society dissolved itself into convenient stratas. Rag carpets gave place to polished floors and pretty rugs, and the melodeon made way for the upright piano. And in the midst of this forward march the log cabin grew suddenly shabby.

"Tain't fit to live in!" asserted Mandy.

"Look at the Smiths' nice new board house!" said the girls.

"We're sick an' tired o' climbin' up a ladder to bed!" protested the boys.

"Wall, mebbe you're right," admitted Farmer Jones, dubiously.

A day came when the log cabin was "moved back."

"It'll do fer a woodshed," said the good wife.

"Tain't fit fer nothin' else," echoed the chorus.

A sawed-board house—square, porchless, homely—settled itself into the vacancy.

"Ain't it grand!" piped the chorus.

The owner, proudly inflating his chest, said, "Wonder what the neighbors will think?"

Then there came another day when Aunt Mandy declared, "I won't h'ist up another bucketful o' water outer that 'ere pesky well! It's too unhandy," she continued. "I want a pump like them Smiths have—that works with a handle."



Sooner or later she got it.

More years sped by. The once "grand" board house came to be looked at askant.

"Tain't in style!" said the chorus.

"Nor big enough!"

"Nor handy!"

Eventually Farmer Jones said, "Mebbe it does need fixin' over a bit."

Thus, by degrees, improvement followed improvement.

Farmer Jones, now old and bent, sits in a Morris chair—and dreams. The wind pumps water for him, modern machinery works for him, steam keeps warmth in his feeble body, hot water is on tap in an up-to-date bath-room, a private gas-plum lights the house, and a host of other "new-fangled ideas" serve to make life comfortable in an almost perfect rural home.

Sometimes he takes his cane and hobbles back of the house to where the moss-covered, moldering old log cabin stands, or down to the "hollow," where the ancient well-sweep still keeps guard over bygone memories, and at such times he chuckles to himself. Contrasts as he sees them are delightfully piquant.

TEACHERS THAT BOYS "HATE"

A boy said the other day that he "hated two kinds of teachers"—the "oh-dears" and "my-dears." A boy is nothing if not courageous, and he expects and admires that quality in others. He detests whining and worrying, weeping and weariness; in a word, all the dreary varieties of "oh-dearing." The teacher who frets at the weather, objects to the class-room, finds fault with the superintendent and the secretary and the ways of the librarian not only sets a bad example, but earns dislike; for when did flies ever love vinegar or boys dull faces? No. Set your face like a flint to look pleasant, no matter how hard it hurts you to do it. "Speak like you do when you laugh," begged a little sick child from her chamber, on hearing a neighbor's plaintive inquiries down-stairs. It is good advice for everybody. Train your voice to notes of exultation. With a gospel of gladness, it is a shame to go about drooping at the mouth-corners. It is not strange that the patronizing and too-demonstrative teacher should be another object of a boy's detestation. No healthy boy cares for coddling and petting, except at bedtimes, possibly, and by his mother. Talk sense to a boy. He will respect it and you.—Sunday-School Times.

FOR BOYS TO THINK ABOUT

It is easier to avoid forming a bad habit than it is to break away from a bad habit. It is easier to avoid beginning to tamper with tobacco and strong drink than it is to free yourself from the appetite if it be once acquired. The dollar you earn and spend is only a dollar; the dollar you earn and save is two dollars. He who makes it his rule always to earn his dollar before he spends it will never be a beggar or a slave to debt. Your being a poor boy may make it harder for you to rise than if you were rich, but when well up once it will be all the easier for you to hold your place. Poverty may keep a boy down for a time, but if he has in him the true metal he will rise. Jay Gould was a poverty-stricken surveyor. George W. Childs was a book-seller's errand-boy at a salary of four dollars a month. John Wanamaker started business on a salary of one dollar and twenty-five cents a week. Andrew Carnegie began life on a weekly salary of three dollars. Abraham Lincoln was a miserably poor farmer's son. Andrew Johnson was a tailor's apprentice-boy, and learned to read after he was married. James A. Garfield was a poor widow's son, and as a bare-footed boy drove mules on the tow-path of an Ohio canal.—Religious Telescope.

Sunday Reading

LONGING

The green road, the clean road; it is so broad and high; It stretches from the happy sea to touch the happy sky. Oh, I laughed once to forsake it, but I'm longing now to take it— The green road, the clean road, that is so broad and high.

The gray street, the gay street; how solemnly it shines! The sun imprints his pleasures, but there's pain between the lines. Oh, I smiled at first to see it, but I'm eager now to flee it— The gray street, the gay street, how solemnly it shines!

The pure love, the sure love, comes over me like rain; The tinsel of my heartless love is turning poor and plain. It's my life I have been giving just to make a decent living, It's my all I have been losing just to get a little gain.

The nest song, the best song, is crying swift and sweet; The tune's within my bosom, but the time's not in my feet. Ah! they only sing for pity, do the voices in the city, Did you ever hear a homely song sound happy in the street?

The gray street, the gay street; for me it holds no rest, Not even when the summer sun is sailing down the west; And I cannot find my pleasure in a road my sight can measure From the little room I dwell in with a memory for my guest.

The green road, the clean road; it is so broad and high; It stretches from the happy sea to touch the happy sky. Oh, to rise and part with sadness! Oh, to move and meet with gladness, On the green road, the clean road, that is so broad and high!

—J. J. Bell, in Chambers' Journal.

THE KING AND THE THIEF

A Hindu thief, upon whom sentence of death had been passed, suddenly thought of a plan by which he might save his life. He sent for his jailer, and told him that he had a secret to impart to the king by which his royal master might become possessed of enormous wealth, but that he would only impart it in a personal interview with him. Word was taken to the king, who ordered the condemned thief to be brought before him. After many salaams and prostrations, the man informed the king that he knew the secret of making gold grow on a tree in the same way as fruit, and offered to make the experiment at once.

The king, accompanied by his chief minister and a few of his most favored courtiers, went with the thief to a place outside the city wall. The thief selected a spot, and taking a gold coin from among his rags, said, "If this be sown in the ground at this spot, then it will bring forth a tree upon the branches of which shall hang clusters of golden coin as thick as the clusters of grapes upon a vine; but there is one essential condition—it must be planted by the hand of a man who has never been guilty of a single dishonest action. My hands are not clean, so I pass the coin to the king."

The king took the coin, and held it nervously in his fingers for a few seconds; then, as he passed it to his chief minister, he said, "I remember when I was young I took a small sum of money from my father's treasury, and therefore I think the chief minister should plant it." The minister, with words of caution, said, "Your majesty, I should not like this most interesting experiment to be exposed to the possibility of failure through any oversight on my part; and as I receive the taxes from the people, and am subjected to so many temptations, it is just possible that my hands are not altogether clean; so, with your royal permission, I shall pass it to the commander-in-chief of the army." But the general would have nothing to do with it. With military brusqueness he said, "No, no; I handle the army money, buy the rations, and pay the forces; give it to the high priest." Even the priest was not prepared to take the responsibility, and said, "You forget that I collect the tithes and allot the sacrifices; I cannot take it."

Then quickly spake out the thief, "Your majesty, why hang me as a thief, when of the five highest men in the kingdom not one will answer for his own honesty?" The king saw the force of the argument, and pardoned the thief.

This is but a story, but it bears a strong moral. All have sinned and come short of the law of God; we have broken God's law, and not one can say, "I am better than you."—Christian and Missionary Alliance.

The Family Physician

By ROBERT B. HOUSE, M.D.

STEAM BATH

When the steam bath is indicated in country practice, it is easily and satisfactorily given by boiling a dozen or more ears of corn, taking them from the water while boiling, wrapping in cloths moistened in hot water, and packing them as closely to the patient as possible. Keep him closely covered, and a few moments will bring the most profuse perspiration you ever saw.

THE DEADLY NURSING-BOTTLE

The filthy nursing-bottle might well be used to illustrate the epitaph of many luckless infants. All seasons of the year claim victims, but the late summer and early fall months seem to yield greater devastation from this cause. All physicians and most mothers know that the nursing-bottle should be kept clean, but few physicians and fewer mothers understand how to completely cleanse the bottle. It is unnecessary to state that the tube should never be used. The entire appliance should consist of a bottle and a nipple. The difficulty in getting nipples large enough at the base to go over the neck of a wide-mouthed bottle and yet have a tip small enough for the child's mouth is generally the cause of the use of a bottle with a neck too small to permit of the introduction of either the fingers or a brush. Yet even such a bottle may be kept clean. We would advise every mother or nurse who has charge of a bottle-fed infant to commit to memory the following directions: As soon as the infant is through nursing, remove the nipple from the bottle and drop it into a glass of saturated solution of boracic acid in water. Empty the bottle completely, and fill with pure boiled water. It is well to have four nipples and from two to six bottles. Once each day cut a raw potato into squares about one eighth of an inch in size, place a few teaspoonfuls in each bottle, and fill the bottle half full of water, and immediately shake thoroughly for several minutes; if necessary this may be repeated, but the potato should be used but the once, and only in the one bottle. After the potato-washing rinse the bottles with boiled water, and place them in boiled water until ready for use. When the child is ready to nurse take the nipple from the boracic acid solution, and rinse in boiled water, empty the water from one of the bottles, and at once fill with milk. It takes hardly as long to do the work as it does to tell about it, and no brush or soap-powders are needed. The plan is entirely satisfactory and absolutely safe. The nipples sometimes take on a slightly greenish tint from their prolonged and repeated baths, but it in no way impairs them. If the bottles are found in a filthy condition, do not destroy them, but place a spoonful of medium-sized bird-shot in the bottle in a solution of some of the soap or washing powders, and after shaking vigorously for a few moments, empty and rinse the bottle, and follow with the potato-rinsing. We immediately destroy every rubber nursing-tube on which we can get our hands, for cleansing them, much less sterilizing them, is entirely out of the question. With the plan given, no strong, offensive or dangerous antiseptics are used, and no child will ever have trouble from either bottle or nipple. We have used it with success for years, and have never had cause to change. We have seen one of our professional friends use rice in lieu of shot or the potato, and he assured us that he attained perfect results.—The Medical World.

Have you counted the Dots? If not, you should do so now. \$1,500.00 cash prizes will be distributed. Be quick. See page 17.

The Family Lawyer

By JUDGE WM. M. ROCKEL

Legal inquiries of general interest from our regular subscribers will be answered in this department free of charge. Querists desiring an immediate answer by mail should remit one dollar, addressed "Law Department," this office.

UNITED STATES MARSHAL.—E. M., Iowa, asks: "Who has the appointing of United States marshals?" The President. If any complaint is to be made you might inform the Commissioner of Internal Revenue.

CHILD'S WAGES.—E. H. R., Ohio, wishes to know: "If a child is taken by her grandmother to raise, and is cared for until the death of her grandmother, can she come in for wages without an agreement between them to that effect?" As a general rule it may be stated that a child can never recover wages from a parent without an agreement; and where a person occupies the position of a parent to a child, then the same rights attach. Without an agreement to pay wages it would be presumed that the child's keeping and education during the years of her minority would be a proper compensation for her services, and she could not recover.

OUTLAWED DEBT.—M. B., Iowa, asks: "A certain heir has not been heard of for twenty years. There was a sum of money coming to him sixteen years ago. A brother heir borrowed this money from the administrator, giving two securities. Now the question is, Are the sureties still responsible for this debt? No one has ever claimed the money, and no settlement has been made. Is the debt outlawed?" The statute of limitations in your state requires a written contract to be enforced within ten years from the time it is given, and therefore, unless some other reason should intervene, the sureties could not be held. In the usual sense of the term, the debt is outlawed.

ASSIGNMENT OF MORTGAGES.—J. F. H., Wisconsin, wants to know: "If real-estate mortgages are assigned, whether such assignment should be recorded, and if there is a change made in the owner of a real-estate mortgage, whether the person who gave the mortgage need be notified of the change?" Unless there is a statute to the contrary in your state, the assignment need not be entered on record; but it is advisable to do so, as a means of preserving evidence of the transfer of title to the mortgage. The person who gave the mortgage need not be notified of the transfer. Generally a mortgage is given to secure a certain note, and the transfer or sale of the note would also convey title to the mortgage, even though there were no written assignment of the mortgage.

M. M. H., Illinois, propounds this question: "A. has boarded and cared for B. for a number of years, as B. is unable to care for himself; A. has never received any pay for same, nor have they ever made any agreement as to what A. was to charge for it. Now, what A. wants to know, can B.'s heirs, all being of age, be compelled to pay the bill in the state of Illinois, and how can A. go about it to get pay?" If A. and B. are not related as parent and child, the presumption would be that B. intends to pay A. for the labor bestowed, and in the absence of any agreement a recovery could be had for what the services were reasonably worth. B.'s heirs are not liable to pay unless they have received property from B.; then they could be compelled to pay to the extent of such property. If B. has left property, an administrator might be appointed, and the claim presented to him.

The Grenadiers at Torcy

By CHARLES E. BRIMBLECOM

PEDRAZZI HUE was fondly handling a black bearskin as he talked to his cousin, Constant Bellefleur. Constant sat on the right of his father's huge fireplace hard at work on bearskin caps for Napoleon's grenadiers. On the other side sat old Gairaud smoking a pipe. Gairaud's mustache was white, and his yellow face was scarred and wrinkled. One ear was withered with frost-bite, one eye was gone, and he had a wooden leg. The old man had been a soldier for forty years, but the retreat from Moscow had left him in this sad plight.

"Where's your daddy, Constant?" growled Gairaud. "He and Uncle Hue went to Arcis."

"Uncle Hue? Oh, this youngster's daddy," muttered Gairaud, turning his one fiery eye on Pedrazzi. "You say you came from America?" he continued, addressing Pedrazzi.

"Yes, monsieur. My father and I came from New Orleans in the ship 'Hero.' We brought a lot of bearskins for Uncle Bellefleur to make into soldier-caps. We bought Loque—that's our old mule—in Havre, and packed the skins on her back and came here to Torcy."

"Where did your daddy shoot the bears, eh?"

"We shot the bears in Tennessee. This is the last skin. There are the others."

Pedrazzi pointed to a shelf, where many finished grenadier caps were piled.

"We shot the bears!" mocked the old soldier, with a husky laugh. "How many did 'you' shoot? Tell the truth, now, boy. How many, eh? Ha, ha!"

"I was there, anyhow," muttered Pedrazzi, sulkily.

"Never mind, youngster," wheezed old Gairaud. "I've been in America, too—long ago. I was at the siege of Yorktown. An English bullet spoiled a new boot for me there. I'd just put it on for the first time that morning. I still burn with rage whenever I think of it."

"But didn't it hurt your foot?" asked Pedrazzi.

"Pooh, pooh! My foot grew again—my boot did not grow again."

Constant and Pedrazzi were both about fourteen years of age. Constant was as thin as a crane, and wore a blouse and trousers of coarse blue linen, with sabots on his feet. Pedrazzi was a massive, sturdy fellow, and was clad in buckskin breeches, thick stockings and shoes, and a blue jacket of knitted wool.

Constant's sister, 'Rene, stood at the fireplace. She was a pretty little girl of twelve years, and her hair fell in two long, shining braids. A large pot hung simmering over the fire, and as 'Rene raised the lid to examine the contents a savory odor came forth.

"Oh, 'Rene, what a good smell!" cried Pedrazzi.

"It is the rabbits for our grand dinner to-morrow," replied 'Rene. "See that you watch it well while I'm gone, Pedrazzi. I wouldn't have it burn for the world."

"Where are you going, 'Rene?"

"To the wood to cut some poles to mend the pen for my geese."

As she spoke a heavy, distant rumble jarred the earth.

Old Gairaud took the pipe from his mouth, Constant looked up from his work, and 'Rene started violently, dropping the lid on the pot with a sharp clatter.

"A thunder-shower is coming. Look out that you don't get wet," said Pedrazzi.

Gairaud burst into a loud, derisive laugh.

"A thunder-shower! Hear him!" said 'Rene, with a look of paleness and scorn. "Cousin, it is the cannon!"

"Cannon!" ejaculated Pedrazzi. He dropped the bearskin, and listened intently to the ominous reverberations.

Gairaud stumped out hastily, and 'Rene quietly took her hatchet from the floor and followed him.

"They growl like bears," said Pedrazzi, uneasily.

"Tough work hunting those bears," answered Constant, shaking his head. "The Russians, the Austrians, the Prussians—all are in France. But the Emperor beats them all. He flashes here and there like lightning, and everything melts before him."

"Umph! You know my father doesn't like your Emperor, neither do I," grumbled Pedrazzi.

Constant shrugged his thin shoulders as he stitched away.

"The Emperor will probably worry along without you."

Pedrazzi fumed and sulked. Presently Constant continued, as if nothing had happened. "But the Cossacks are the worst. They have horns on their heads, and hoofs inside their rawhide boots. They kill every one, and drink the blood of children."

"Horrible!" cried Pedrazzi, with a startled look.

Constant got up to inspect the stew. He lingered over it, inhaling the delicious fragrance.

"How far off are those cannons?" asked Pedrazzi, in an earnest tone.

Constant reluctantly withdrew from the lip of the pot.

"Oh, I don't know," he replied, indifferently, stretching his arms.

"They are coming nearer," asserted Pedrazzi, loudly.

"That is the Emperor's business," said Constant, returning to his stitching. "But old Gairaud says that if they come here he will build a barricade in the street."

Pedrazzi went to the corner where his father's heavy gun was leaning, and examined it with solicitude.

"Firefly is loaded," he said, with an air of reassurance.

"Put it down, or it might go off," said Constant, uneasily.

"Ho! What a coward you are!" jeered Pedrazzi.

"You're a bigger one! My father is an old soldier, and he says that a gun is dangerous if it hasn't lock, stock or barrel; but it's more dangerous if a person peeps down the barrel to see if it is loaded."

"I didn't!" growled Pedrazzi.

"You did!" laughed Constant.

The quarrel was interrupted by loud outcries in the street. The door opened, and 'Rene came in with a bundle of small poles in her arms, and threw them on the floor. She was out of breath with running. The shouts increased.

"What is the matter, 'Rene?" asked Constant.

"The foreign soldiers—are coming—on the north road!" panted 'Rene. "I saw them—from the wood—and hurried home! I told Lamory and old Gairaud and Mere Sarpeu and Little Lisette! How Lisette did run! Everybody knows it by this time!"

'Rene went to the fireplace to see if the rabbit-stew was burning. Constant and Pedrazzi ran to look into the street.

"Good!" called Constant. "Old Gairaud is building a barricade. He said he would. They've got Mirandetti's and Mehut's and Gobar's carts, seven wheelbarrows, Mere Sarpeu's big bedstead, three tables, a pile of chairs, and they are digging up the paving-stones. Vive Gairaud!"

"Let us go, too," said Pedrazzi, excited by the scene. "Since there are so many against your Emperor, I'll help him, out of pity!"

Pedrazzi and Constant went to help the builders of the barricade. Men, women and children were all hard at work bringing all sorts of material for the rude fortification which was to keep the enemy out of Torcy. A few muskets, ancient horse-pistols and pikes appeared.

All at once there was a startling change. At one moment all was courage and activity; the next, a wild panic seized every one. A man ran in from the north road, white with fear, screaming, "The Cossacks! The Cossacks! Fly for your lives! Save himself who can!"

An instant later the whole population of Torcy was mingled in a wild stampede for the neighboring town of Arcis. Even old Gairaud retreated on his wooden leg. It was much talked of afterward, but the weight of evidence seemed to be that he yielded to the entreaties of his wife, who was six feet tall and rather stout. She loudly declared that the savage Cossacks should not have his remaining leg and eye, and so led the ancient warrior away by his remaining ear. There are times when even the bravest must yield to circumstances.

Not quite all departed, however. There remained 'Rene, Constant and Pedrazzi.

"I'll get Loque! We can all ride!" gasped Pedrazzi, starting toward the little garden at the rear of the cottage, where the old mule was tethered.

"No!" said Constant, whose eyes were twice as large as usual. "I can't leave our bearskin caps! The Emperor depends on us! And my father paid good money for the bearskins!"

"We'll pack them on Loque!" exclaimed Pedrazzi, more excited.

"But there are my geese!" said 'Rene.

"Tie their legs, and pack them on Loque!" bellowed Pedrazzi.

"And there is the rabbit-stew!" cried 'Rene, clapping her hands together. She ran to the cottage, losing one of her sabots on the way.

"I'll carry it!" shouted Pedrazzi, following her with great speed.

"Pedrazzi!" called Constant, with such earnestness that his cousin stopped short, "you take 'Rene on the mule, and hurry to Arcis! I must stay and keep the Cossacks out of the house if I can! If you see our soldiers, tell them about the bearskin caps—and me!"

"You're a fool, because they'll break in anyhow, and kill you into the bargain; but if you're going to stay, I'll stay, too!" said Pedrazzi, recovering from his panic. "We can pack the bearskin caps and the geese and 'Rene and the rabbit-stew on Loque, and send them off!" And he ran into the cottage.

A minute later he reappeared, very red with anger and perplexity. "Oh, Constant!" he roared. "Make 'Rene go, will you?"

In a moment 'Rene came running out with her bundle of goose-poles in her arms.

"'Rene, you get on Loque and go to Arcis this minute!" commanded Constant. "You mind me now, or I'll tell father!"

"I shan't!" replied 'Rene, pouting. "I've just thought of a way to scare 'em! Bring out your soldier-caps! We'll stick up these poles along the barricade, and put a cap on the top of each one, and the Cossacks will think the soldiers are here!"

"Good!" exclaimed Constant, admiringly. "What a head you have, 'Rene!"

He ran to the cottage, and soon emerged with a huge armful of the grenadier caps. They were set up on the goose-poles along the barricade, as 'Rene had directed. An enemy advancing in front might well have imagined that the barricade was manned by grenadiers.

By the time this was done Pedrazzi came from the cottage carrying Firefly on his shoulder. His face was redder than ever.

"I said I'd help your Emperor, and I will!" he exclaimed, loudly, to fortify his courage.

"Here, then!" cried Constant. "We must each of us put on a cap! It will help to fool the Cossacks!"

He and Pedrazzi donned the huge caps, and then Constant placed one on

'Rene's shining head, but it fell down to her shoulders, entirely hiding her pretty face. Pedrazzi burst into a loud laugh; but 'Rene wound her apron about her head, and so succeeded in keeping the great cap in place.

"They're coming!" shouted Pedrazzi, his laugh ending as suddenly as if he were already pierced by the Cossack lances.

"Now, 'Rene," said Constant, hurriedly, "we must run back and forth along the barricade, and shake the poles, so as to make the caps move as if there were men under them!"

The approaching enemy seemed weird and indistinct under the cloudy March sky—a mass of shaggy horsemen filling the highway, pouring swiftly along. Above them a forest of lances bristled, wild and menacing. When they saw the barricade there was a halt. Several Cossacks rode cautiously forward to reconnoiter. Two or three of them stood up in their saddles. They came closer.

Pedrazzi was resting Firefly on the barricade. He aimed the long rifle at the daring scouts, and pulled the trigger. There was a loud report, and the barricade was enveloped in smoke.

"Good-by to the Cossacks!" yelled Pedrazzi, triumphantly.

Slowly the smoke drifted away, and the three defenders of the barricade peeped eagerly over, expecting to see the road strewn with dead men and horses. But not one was there. The scouts had scampered back to the main body.

There seemed to be much confusion and hesitation among the Cossacks. Their restive horses pranced and sidled and tossed their wild heads. Pedrazzi hurriedly reloaded the rifle, ramming down the bullet and forgetting the powder. Such things will happen in one's first battle.

'Rene and Constant were industriously shaking the grenadier caps, and aided the deception by thrusting goose-poles over the barricade to simulate muskets. So half an hour passed.

Suddenly the front rank of Cossacks vanished in darting smoke. There was a crackle of shots—a fierce, menacing buzz of bullets over their heads. Some of the grenadier caps were strangely agitated, and the white splinters flew from Mere Sarpeu's big bedstead.

'Rene screamed and tumbled down, but she was only frightened. Constant turned pale, and picked up a paving-stone. Pedrazzi grew as red as a lobster, but rose to the occasion and primed his flint-lock. They all peeped out, fearfully. Then Pedrazzi yelled like a wild Indian with joy, for the shaggy mass of horsemen was in rapid retreat.

As they gazed, entirely absorbed in the retiring enemy, they heard a laugh behind them, the tramp of horses, and a voice said, "Capital! Capital! What an excellent ruse."

They turned hastily, and saw a party of mounted officers near them, and in the distance there were large bodies of French troops rapidly advancing in pursuit of the Cossacks. The one who had spoken was a stout, well-built man, mounted on a beautiful white horse. He had keen gray eyes and an odd, sallow complexion, but he smiled very pleasantly and showed fine white teeth. He wore a dark green coat faced with bright red, a gray overcoat, white trousers and high boots, and a military chapeau drawn down on his forehead.

"Bravo, my children!" exclaimed the officer. "Who originated this clever stratagem?"

"My sister, monsieur," replied Constant, turning to 'Rene and waving his hand. He then saw that 'Rene, being bashful, had drawn the apron from her head and allowed the big grenadier cap to fall down upon her shoulders.

"Indeed!" said the officer. "We cannot permit beauty and valor to be eclipsed in that way."

He spoke in a low tone to an officer of his staff, who at once dismounted, approached 'Rene, and gracefully lifted the cap from her pretty, blushing face.

"Messieurs," said he on the white horse, "France is safe, since even the little maidens have taken the field."

The staff-officer returned the cap to 'Rene with a most superb bow, and sprang into his saddle.

"Vive l'Empereur!" cried a weak, husky voice.

"Vive l'Empereur!" bellowed a voice like distant thunder.

The first was Bellefleur himself, who had been shot through the breast at the Battle of Austerlitz—ever after suffering from weak lungs. The second was Uncle Hue—a great, dark giant of a man, whose dislike had suddenly vanished on meeting the Emperor face to face. They had hastened from Arcis to the rescue of their children.

Napoleon gave them a lightning glance, and returned their military salutes; then he and his brilliant staff rode rapidly away toward the advancing troops.

Our rejoicing villagers returned to the cottage. But it often happens that when people faithfully serve their country their private interests suffer during their absence. An odor of burnt meat filled the room.

Alack, for the grand dinner! Alas, for the rabbit-stew!

But when 'Rene angrily threw her bearskin cap on the floor, a gold Napoleon rolled merrily forth, and some yellow comrades clinked musically behind it.

IT WAS Saturday morning. Farmer Martin pushed back his plate and rose from the breakfast-table with a scrape of his chair on the yellow-painted kitchen floor.

"Ednie, I guess you'll have to take the milk to the station this mornin', can't ye? I've got to go to the mill, and I must strike right out. I want Gus to get in a good day's plowin'. He'll load up the cans 'fore he goes to the field."

"Yes, papa, I'll go," replied the girl, suppressing a yawn as she slipped languidly into her place at the table. "Oh, dear, I am sleepy yet! You folks get up so abominably early here. Lucky for me that I am not home all the week."

"Well, see that that new feller down there tags the cans all right," said Mr. Martin, as he took his hat and coat from the peg, and put them on as he went out.

The girl sipped her coffee listlessly, and broke a fragment from a slice of bread.

There was a noise of rattling cans at the back door, and then a gray pony and light wagon stood at the side porch. Edna rose from the table.

"I'll make the pudding for dinner, mama, when I come back."

Edna always meant well. Just at present it was her ambition to graduate from the Rockford State Normal School, which she attended in the city. After that she meant to be a teacher in the high school, and after that—well, after that there was married life, of which she already had visions, in which wealth and social prestige figured largely. Her sixteenth birthday just behind her, half bewildered and half entranced she felt the awakening of the sentimental side of her nature.

On this particular morning, as she drove along the smooth country road, she let Dandy take his own pace. The morning breeze loosened little locks of her bright hair, and sent them straying over her pink cheeks. Blue and white asters nodded by the roadside, and the sound of a threshing-machine came softened and musical from the distance.

Will Ditson, in shirt-sleeves and blue overalls, was plowing along the highway side of the Ditson forty. He stopped whistling as Edna passed, and greeted her awkwardly, his face flushing with unconcealed pleasure. She rode on with a smile lingering upon her lips and a deeper pink in her cheeks.

When she reached the station the other milk-wagons had come and gone. No one was in sight as she drew up beside the platform. Alighting, she tied Dandy to a telegraph-pole, and turning, met the half-apologetic and wholly well-bred smile of the new station-agent. He was a young man, with dark eyes and curling mustache. A becoming uniform cap pushed back from his forehead showed a wavy line of dark hair.

"You have a delightful morning for your drive," he said, taking the cans from the wagon, and smiling again with much pleasantness.

"Yes; I have enjoyed it so much."

"I can readily believe it," he returned, surveying with open admiration the brilliant complexion and shining eyes before him.

The girl's unwilling blush did not escape his notice. He hastened to add, "It is far pleasanter than being confined in a dingy office. I wish it were my rare fortune to share your homeward drive. I am a lover of autumn flowers. They must be abundant along the river road, are they not?"

"Oh, yes, indeed! I saw such lovely asters this morning! I could not help thinking it a pity that their beauty should be almost wasted, for there are few travelers on the river road, you know."

"They are my favorite flowers. If I might presume to ask the favor, I should so prize a spray of them when your route lies in this direction again." His eyes asked a reply.

Edna hesitated; but feeling that she had blunderingly made the way for the request, at length replied, "I will remember."

"Thank you." It was said very, very gratefully.

"These cans go to Fairmont Brothers, Humbolt." It was her first opportunity to mention it.

With a bow humbly apologetic he went for the necessary tags. Edna noted, as he walked down the platform, how faultlessly neat was his uniform.

"I am sure you will allow me to anticipate your kindness," he said, returning with the tags and also a half-opened Jacqueminot. "It is from my desk."

There was no mistaking the real pleasure that shone in the girl's eyes as she accepted the flower.

For some reason it required a good deal of time to attach the tags to the cans, but at last Edna turned to go. With irreproachable gallantry the young man assisted her into the wagon and untied the now restive Dandy. In handing the reins to her his hands touched hers, lightly but lingeringly. They were as white and soft as a girl's.

She thanked him.

"I assure you the obligation is mine," he protested. "I trust I may have an opportunity of repeating the pleasure very soon?"

Edna did not reply.

Lifting his cap with exceeding grace, he flashed the pleasantest of smiles after the departing wagon. She could not see the look of satisfaction that rested upon his face as he entered the depot.

Returning by the Ditson farm, Edna saw Will at the farther side of the field, and for the first time noticed that he walked with a slouch. How dreadfully ugly blue overalls were!

Dandy loitered at his own will as the girl dreamed

The Romance of a Day

By MARY E. MERRILL

along her homeward way. Again and again she recalled the expression of the station-agent's dark eyes, the touch of his hand, his polished manner, and the grace of his language. Ah, he was different from Will Ditson!

"Half-past eleven!" she exclaimed, glancing at the clock as she entered the door. "Why, mama, I did not mean to be gone so long! I must have let Dandy poke dreadfully. I'm so sorry it is too late to make the pudding!"

"Never mind, Edna; the pudding is made."

All day she was dreamy and absent-minded. Not until Mr. Martin inquired for "chop-sticks" did she know that she had set the supper-table minus knives and forks.

The family were gathered in the sitting-room after supper when Edna astonished her father and mother by saying, "I don't want to go to school any more. Mayn't I stay at home this fall? You need my help, mama, and I could take the milk down for you every morning, papa."

"And give up the Normal chance you have looked forward to for so long?"

"But I've changed my mind about it, mama."

"Stuff and nonsense! Don't talk foolish, girl," spoke Mr. Martin, sternly, and the subject was dropped.

A little later Edna took her lamp and started upstairs. At the top she stopped to listen, for startling words in a neighbor's voice came floating up from the sitting-room. The caller was delivering the latest piece of news. She caught snatches of the tale.

"The new agent—run him in this afternoon—slick chap—"

Edna stole softly down-stairs, and stood listening in the hall.

"Yes, he's been here only two weeks, but that's long enough for the railway company to spot a rascal. Some valuable express-packages disappeared at this station. He was suspicioned. Caught him at it, red-handed. Yes, he's likely to be sent up for a good term. Got his deserts, the slick-togged, lily-fingered villain! Was sweet on all the girls around here, and they say half of 'em fell in love with the slippery-tongued fraud! Got Tremont back there now. Give him a raise to get him back. Guess the company's decided it pays to keep an honest man."

Noiselessly Edna crept back up-stairs. With flaming cheeks she stood for a while by the open window, looking out upon the moon-lit fields and the strip of woods that bordered the river road. Then she took from a trinket-box a faded rose, and flinging it impatiently out of the window, sat down to her geometry-lesson.

THE END OF THE VOYAGE

BY WILLIAM FORSTER BROWN

"OLD CAPTAIN DAN" sat on the piazza of his little cottage, gazing wistfully over the moon-lit harbor. Never again, he thought, should he see the light on White Head sweep out to sea like a golden finger; never again listen to the surf come crashing in on the outer bar, for in the morning he was going far away inland—to the poorhouse.

The home he had built in his youth, where Mary and he had lived and loved so many happy years, was his no longer. Jack, the sailor son of whom he had been so proud, was sleeping somewhere beneath the long Atlantic surges "until the sea give up its dead;" and Mary had gone to the quiet hillside—he could almost see the cross that marked her grave gleaming white in the moonlight.

It was hard, after forty years of battle with storm and tempest, to be left alone with no one to care; like a broken and useless old hulk, drifting on a lee shore—he longed for Jack's strong right arm to lean upon, he had only such a little further to go.

A feeling of resentment welled up in the Captain's heart. Many a time he had stretched forth a helping hand to others; why was there none to help him in his extremity? Why had Jack been taken, and his father left to come to shame in his old age—he had always feared God and done evil to no man.

The old man bowed his head on his shaking hands, a sharp pain darting through his temples; strange, he thought, that he should always have that curious ache in his brain every time he tried to think hard and clearly. Perhaps if it were not for that, some way would come to him to save his honor. Somehow he never thought of the "care and comfort" of the poorhouse that his well-meaning neighbors talked of so glibly; only the shame of it.

The pain seemed worse than ever to-night, and his thoughts grew more and more vague and bewildered. Where was Mary? Why didn't she come and lay her cool fingers on his aching head, as she used to do? Hark! who was that calling him? Surely it was Jack's voice—yet some one had told him that Jack was dead.

Captain Dan staggered to his feet, pressing his head between his icy palms, the sea and sky reeling around him like a gigantic kaleidoscope; involuntarily he stretched forth his trembling hands heavenward, and to his lips came the agonized appeal of the Man of Gethsemane, "Why hast Thou forsaken me?"

Suddenly, as if in answer to his prayer, something snapped in his throbbing brain, his senses cleared, and

muttering to himself, the old man stared eagerly beyond the white line of the bar at the shining headsails of a ship making her way slowly into the harbor against the ebbing tide, and as he looked her outline grew more and more familiar.

"It's the 'Daylight!'" he cried, hoarsely. "My old ship, the mainyard

fished, the same brown patch on the foresail. They lied when they said she was lost. She's come back for her old captain. If I can only get aboard of her I'll be safe. They won't dare take me to the poorhouse with my men around me."

Captain Dan stumbled hastily down the steps to the beach. "Yes, yes," he whispered, animatedly, to himself, "I'll be safe on that ship. Perhaps I'll find Jack there, too, waiting for me. Then we'll sail away together, and look for mother. She's been gone so long I'm weary waiting. She said I should find her again, 'when the voyage was ended.' It's time I put to sea—if Jack's there he'll know the course."

Untying the painter of his boat, the old man shoved off, talking incoherently to himself, and began pulling stiffly for the harbor mouth. The lights of Fairport grew dim in his wake. "Only a little further," he whispered. "I'm almost within hail now." He peered anxiously over his shoulder, shading his eyes with his hand. The ship, her snowy canvas showing ghostly in the soft moonlight, was swinging slowly around seaward, the faint creaking of her yards distinctly audible. Captain Dan rose to his feet in sudden fear. "She's going out to sea again!" he muttered, wildly. "I mustn't let her go without me!"

The oars slipped unheeded from his tired fingers as he strained his dim eyes on the receding ship. "Who's that," he muttered, in an awe-struck voice, "leaning over the rail beckoning me? It's a woman—it's—it's Mary!"

The old man's bent form straightened as if by magic, throwing off the weight of years, and he stood erect as he had in the days of his vanished youth, while his hands came up to his lips in a quick, imperious hail. "Ahoy, the 'Daylight!'" he cried, the call ringing sharp and clear over the quiet harbor. "Heave the ship to, the captain wants to come aboard!"

Across the water came a quick response; but unmindful, Captain Dan stood for a second, his arms reaching toward the ship in a very ecstasy of longing—then, with a little sigh of unutterable content, the old captain, suddenly pitched forward across the thwart.

The bell in the little white church was ringing for morning service when rough, but kindly, sailor hands bore the captain tenderly through the door of the little cottage and laid him silently on his narrow bed.

"The old man's head must have gone back on him," said the mate, looking down on the smiling face. "He took the 'Asia' for his old ship that's been on the bottom for ten years. He stood up in the boat, and hailed the 'Daylight,' then we saw him fall—he was stone-dead when we picked him up. It's a lucky thing we saw him, or he might have drifted out to sea. He's got a smile on his face, too, like as if he was trying to thank us for bringing him home."

"You haven't brought him home," said the minister, simply, gazing down on the inscrutable smile on the weather-beaten face he knew so well. "Captain Dan had gone home before you reached him—with a Captain who never drifts—aboard the 'Daylight.'"

WE SCRIBES

The builders of cities, of worlds, are we,

The unnamed scribes, and of unknown worth;

For we are the kinsmen of Progress, and he

The one Prince we serve on the whole wide earth.

Nor gold, nor glory, nor name we claim—

We ask but the right, unfettered to fight;

To name a wrong by its shameless name;

To slay the wrong for the love of the Right.

The sentries of cities, of worlds, are we,

Each standing alone on his high watch-tower;

We are looking away to the land, to the sea;

We have only a lamp in the midnight hour.

Then leave us the right to fight or to fall,

As God may will, in the front of the fight,

Unchallenged, unquestioned, for the good of all,

For the truth that lives, for the love of the Right.

The givers of glory to nations are we,

The builders of shafts and of monuments

To soldiers and daring great men of the sea;

But we are the homeless, strange dwellers in tents,

With never a tablet or high-built stone.

Yet what care we who go down in the fight,

Though we live unnamed, though we die unknown,

If only we live and we die for the Right?

There are brighter things in this world than gold,

There are nobler things in this world than name—

To silently do with your deeds untold,

To silently die unnoised to fame.

Then forth to the fight, unnamed and alone,

Let us lead the world to its destined height;

Enough to know, if but this be known,

We live and die in the ranks for the Right!

—From "Memorie and Rime," by Joaquin Miller.

THIS WILL BE YOUR LAST CHANCE

To count the dots and try for the \$500.00 grand prize in the Dot Contest, page 17 of this paper.

FASHIONS

THE season when summer styles pushed and jostled one another in their desire to get to the front has passed, and certain designs for gowns and patterns in trimmings and colors in frocks, hosiery and the like are well established. Not only are the fashions for the remainder of the summer well known, but the styles for next year are forecast so that people to whom economy is a necessity may buy this season new styles which will be equally dressy next season.

For instance, in the way of color combinations this summer has been a white-and-green summer, so to speak. Next summer promises to be white and turquoise-blue. Of course, there is no certainty that this will be the case, but as the old darky tells me about the weather, "all de indications p'int dat way."

Light blue is the new style in Paris; foreign manufacturers are sending it to this country already for wear next summer, and American manufacturers are making up exquisite designs in this charming color. These are all good indications that blue will be stylish, and it is sufficiently stylish now to make it profitable to buy and wear such a gown. Brown and tan have had such a run that it is improbable they will be much worn by the swell set this coming winter. Dark green and other shades of that color appear to promise well in what is known as the popular trade among merchants. That is, green for winter wear has passed the exclusive stage and is thrown upon the market broadcast. If you want to be real swell and exclusive wait a bit before thinking of fall costumes; last more than one year, for several colors are being experimented with, and the prevailing style is not fully determined. Plaid silks of bright colors are going to be stylish, especially for trimming purposes, and stiff, figured silks will have a big run because of the Dolly Varden pompadour styles so much in vogue.

Lace will be fashionable for a long time to come, but braids will be the swell trimmings for winter and fall, since Paris has decreed that braids are "the thing," and so many exquisite varieties of braids have been, and are being, brought out for trimming of every description.

For the North this will be a fur winter. Fur will be used as trimming upon everything, and will appear with braid, and possibly, as last year, with lace. A cloth dress trimmed with fur will be in the height of style.

Tassels are coming to the fore with a rush. Tassels end the gathered tips of flounces and boas; they are fastened to small silk ornaments, which are now very popular for application upon dresses, sacks, coats and sleeves; they are used as a finish to many articles of dress adornment, and are much used on cords which tie the loose kimono wraps in front, or as lattice-work across the front of silk gowns.

The Parisian note of light blue will be the key-note of color in cotton fabrics for next summer, and the person who buys a light blue dress now will be right in the style for next year. This is demonstrated by the fact that some of the largest importers and manufacturers are introducing lovely cotton fabrics having light blue in the design or as a ground pattern.

For wash-goods there are cotton, linen and mercerized braids of wash-materials, but it must be owned that real and vegetable silk braids are the prettiest, and most of them stand washing very well. Braids come in so many combinations that they are suited to any purpose. There are wash-braids, and lace and braid mixtures, and in fact every combination that could be either useful or beautiful as trimming for a garment.

Among some of the best-selling braids of the season are cotton and mercerized soutache in white, the new champagne color and écreu shades, as well as blue and green and red. Pompadour braids, in which are combined delicate shades of pink, blue and green, are also in favor in the narrow varieties.—New Orleans Picayune.

STEM-GREEN SUIT

The delicate shades of green have been very popular for some time. The innovation of Paris green during the late summer found a few followers, but only for a short time. As soon as it became a little notice-

How to Dress

able upon the streets the exclusive dressers dropped it. This suit is of stem-green virole, and with its combination of various openwork stitches and lace makes a very striking dress. The waist can be made unlined, or lined throughout, or lined to the yoke, making the yoke transparent, this latter being more suitable for evening wear in the house. A thin silk slip should be worn under this as a protection against cold, as it is a



CHILD'S GUIMPE FROCK

very cool dress to wear. The skirt has a tucked flounce, that gives a good flare at the bottom.

CHILD'S GUIMPE FROCK

Simple frocks for little girls are always most desirable. They may be worn with or without a guimpe, as the weather permits. Several guimpes could be made to use with one dress—wool ones for cool days, and fine lawn ones for warm days—giving a pleasant variety.

This dress is of blue and white madras, trimmed with embroidery, and worn with a sash of blue ribbon, but all washable fabrics are suitable and appropriate.

AFTERNOON GOWN

Afternoon gowns made with simple blouses are much worn, and make becoming, as well as fashionable, toilets. This smart model combines a new waist that closes at the back. The costume is of canvas veiling in blue, with stitching of blue, and collar and cuffs of cream Irish lace. The design is adapted to suit a number of other materials, and can be used very well



STEM-GREEN SUIT



AFTERNOON GOWN

separately, if desired, the waist being very appropriate to use as a separate waist of silk or light-weight wools for early fall, and the skirt very desirable for all utility purposes of whatsoever nature.

INDOOR GOWN

As pale blue seems to be the coming color, combined with black it makes a very effective contrast.

This gown is made of soft pale blue wool veiling or any soft material, with stitchings of black, and having a vest, revers, collar and cuffs of cream guipure overlaid with stitched bands. The foot of the skirt is

finished with bias folds, or shingles, as they are called, of the material. The waist-band is a soft black louisine ribbon confined with a matrix turquoise.

This would be a charming costume for a girl with a clear complexion, black hair and blue eyes. Pale blue is by all odds the color for a brunette. One having

a clear olive complexion with no color could wear this better than any one else.

SLOT-SEAM COSTUME

"Slot-seams," or tucks turned toward one another, are among the late features of fashion, and promise to extend into the fall styles. This suit is of black and white checked taffeta, with bands of black velvet. The design is an admirable one, and suits a variety of materials.

DRESS FOR MATRON

A swell gown for a woman past her first youth is a model made of close-fitting black lace, slightly spangled with jet, and having on each side of the front of the skirt two scrolls of black velvet, each about twenty-four inches long and three inches wide, which slanted out a little at the bottom and were edged with jet. The same motifs appeared in the bodice. The elbow-sleeves and yoke are lined, and long black gloves and a rather large black hat are worn with the costume.—Exchange.

A PRETTY HAT

A fancy straw braid showing a mixture of black and écreu and in a plaited design was employed in fashioning a stylish street-hat intended to be worn with a veiling or batiste gown. The crown was rather low and flat, and the medium-wide brim, which dipped at the back, bore a bow of soft black satin ribbon, the fringed ends of which fell almost to the shoulders. A wreath of black and deep-yellow poppies

having black centers was arranged on top of the brim, while tiny yellow and black buds, with a bit of green foliage here and there, were placed against the inside of the brim on the edge. This creation would be very becoming to a brunette, while the same idea carried out in shaded pink and black roses would be charming for a fair wearer.—The Delineator.

A STYLISH HAT

An all-black hat of the picture type is one of the most useful bits of head-gear in the outfit of the fashionable woman, its charm accentuating that of a dainty gown of some delicate color or pure white. One of unusual charm and elegance was made of black satin straw braid, and the wide brim was straight over the eyes in front and flared slightly at the left side, the approved dip appearing at the back. A soft drapery of black Chantilly lace was arranged over the brim, the edge falling over, and at each side of the back it was in cascade effect. Black velvet ribbon formed into a bow was placed on a bandeau at the left side, and two black ostrich-plumes swept gracefully around the crown, with the ends falling over the brim at the left side toward the back. A rich pearl-and-jet cabochon seemingly held the plumes in position at the right side, where the ends were completely concealed amid masses of lace.—The Delineator.

Any of these patterns furnished from this office for ten cents. Waist and skirt can be purchased as separate patterns.

SLOT-SEAM COSTUME.—Waist, No. 4178. Bust measures, 32, 34, 36, 38 and 40 inches. Skirt, No. 4197. Waist measures, 22, 24, 26, 28, 30, 32 and 34 inches.

AFTERNOON GOWN.—Waist, No. 4209. Bust measures, 32, 34 and 36 inches. Skirt, No. 4115. Waist measures, 20, 22, 24 and 26 inches.

INDOOR GOWN.—Waist, No. 4203.

Bust measures, 32, 34, 36, 38 and 40 inches. Skirt, No. 3815. Waist measures, 22, 24, 26, 28 and 30 inches.

CHILD'S GUIMPE FROCK, No. 4196. Sizes, 2, 4, 6 and 8 years.

STEM-GREEN SUIT.—Waist, No. 4205. Bust measures, 32, 36 and 40 inches. Skirt, No. 3890. Waist measures, 22, 24, 26, 28, 30, 32 and 34 inches.

THE DOT CONTEST

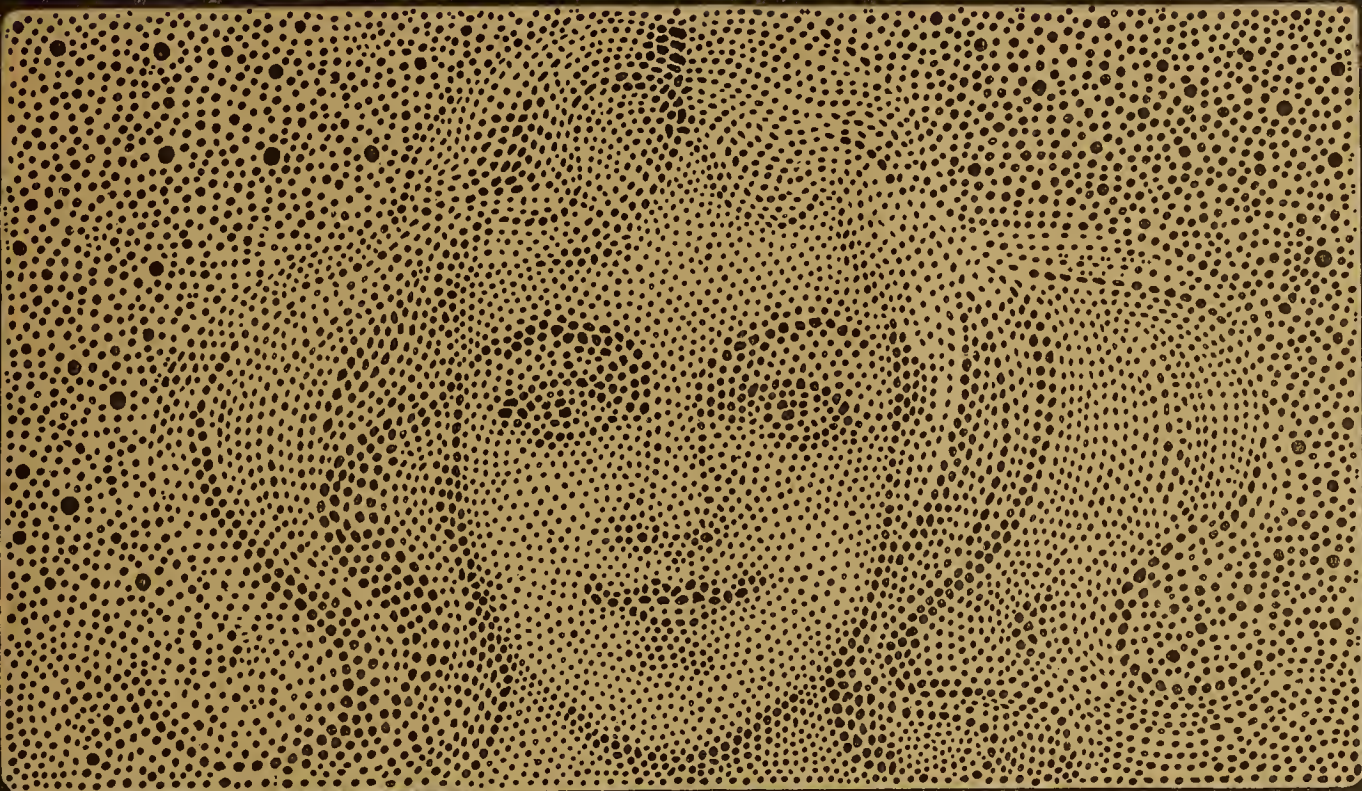
is open to all. An hour's work may net you a handsome sum of money. Full particulars found on page 17 of this paper.



SLOT-SEAM COSTUME

Be Nimble, Be Quick

And You Can Still Come in at the CLOSE OF THE DOT CONTEST



As announced, this contest closes with the month of August. The last day of the month falling on Sunday, counts received at our Springfield office Monday, September 1st, will be entered in the lists of competitors for the prizes. As this paper goes to press two weeks before the date, after receiving your copy you will still have time to count the dots and have equal opportunity with others for the grand cash prizes. Make your count at once and send it by the next mail. Or if you have already sent one count, why not try another? But there's no time to spare.

\$1,500.00 IN CASH PRIZES WILL BE AWARDED SEPTEMBER 1st FOR THE CORRECT OR NEAREST CORRECT COUNTS OF THE DOTS IN THE ABOVE DIAGRAM

Every one sending 35 cents, the regular clubbing price, for one year's subscription to the Farm and Fireside will be allowed ONE count of the dots free.

Three yearly subscriptions and *three* counts (either for yourself or others) for One Dollar.

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| 4 Prizes, | \$25.00 each | \$100.00 | Cash |
| 10 Prizes, | \$10.00 each | \$100.00 | Cash |
| 40 Prizes, | \$5.00 each | \$200.00 | Cash |
| 150 Prizes, | \$2.00 each | \$300.00 | Cash |
| Total | | \$1,500.00 | Cash |

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This magnificent offer is made for the exclusive benefit of the readers of the FARM AND FIRESIDE.

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The exact number of the dots can be counted by any one at the price of a little time.

The prizes are so great that you have a big chance of winning hundreds of dollars for the short time it takes to count the dots.

If two or more give the correct count the grand prize will be divided, and the same method will be adopted in awarding the other prizes.

Even if your answer is not correct you may get a prize, because the money goes to those who send in the correct or nearest correct counts. We do not care who wins the prizes. They are yours if you have the skill and perseverance.

No one employed by or connected in any way with the FARM AND FIRESIDE, nor any resident of Springfield, Ohio, or its suburbs, is allowed to enter the contest.

If possible, use the subscription blank printed on this page; or, if desired, a sheet of paper may be used the same size as the blank printed on this page.

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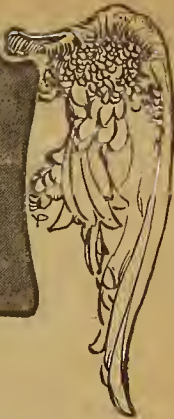
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NEWS-NOTES

ACCORDING to the recent census there were on June 1, 1900, almost two million goats in the United States. Texas contains the largest number, or a little more than one third the total number. New Mexico contains the next greatest number.

The area of sweet-corn in Maine in 1901 was twelve hundred acres. When canned there were nine hundred and fifty thousand cases of twenty-four cans each, or twenty-two million eight hundred thousand in all, valued at one million six hundred thousand dollars.

It requires more than an ordinary degree of horticultural nerve to thin out fruit as much as it should be done. This season the orchardists at Elsinore, Cal., have thinned their fruit three times, and to save the trees and secure a fair crop next year it will have to be done a fourth time.

Japan, which now has a population of forty-five million people, is required to import heavily of beans and peas, also of phosphates for the production of other crops on the very limited area of land available for the support of so large a population. The crops grown must of necessity be those possessing the greatest nutritive value.

The vast amount of money which the farmers and planters of Georgia expect to use in the purchase of commercial fertilizers this season (nine and one half million dollars) is an indication of how much dependence is placed upon this class of fertilizers, mainly for the production of cotton, which is the money-producing crop in that state.

According to the twelfth census the number of milk-cows has not kept pace with the population. Unless substitutes are provided to take the place of genuine dairy products as articles of food there is likely to be a sharp advance in the prices of first-class dairy products. The breeding-up of a higher grade and a greater number of dairy-cattle is therefore in order, and will be for many years to come.

Dr. B. T. Galloway, Chief of the Bureau of Plant Industry in the United States Department of Agriculture, which, by the way, is fully as large as the Department was in 1880, has arranged for beginning the cultivation of Egyptian cotton in Louisiana and Texas and in other states that border on the Gulf of Mexico. The annual imports of this variety of cotton into the United States aggregate eight million dollars.

The increased production of bacon and hams in Denmark has been phenomenal. In 1878 the production was but nine million one hundred and twenty thousand pounds, whereas in 1898 it had increased to one hundred and twenty-nine million seven hundred thousand pounds. Owing to the prohibitive measures of Germany and the establishment of slaughter-houses, it became necessary to export a manufactured product to other countries. As a result there are now twenty-five coöperative slaughter-houses in Denmark, and all are doing a thriving business.

The wide-awake horticulturist now recognizes the fact that the age of marmalades, jellies, jams and preserves is now here, and here to stay. We are sure to have from our canneries a sufficient supply of parings and cores of apples for the making of jellies without having to resort to the use of turnips, which, it has been intimated, is the real base of much of our imported jellies. The time is close at hand when all substances suitable for food will be utilized to the fullest possible extent. The results of laboratory-work are sure to have a most important bearing in this direction. ***

\$500.00 AN HOUR IS PRETTY GOOD

wages. An hour will count the dots in the Dot Contest. See page 17 of this paper.



Catalogue No. 71 now on the press, the finest catalogue ever published; 80 buyers have worked for months collecting the goods described in this book. Printing and binding are by the Lakeside Press; engravings by Osgood; colored inserts by the American Colortype Co.; cover design by the well-known artist, Ike Morgan—1080 pages; 70,000 quotations; 17,000 illustrations. 15c. and this catalogue is yours. Send TODAY.

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Entirely new from cover to cover, containing over one thousand pages and illustrated by one of the best engraving houses in Chicago, our Fall and Winter Catalogue No. 71 is now ready for delivery. If you have never tried us now is the time to begin. Start with our new catalogue. Fill in the blank below, cut it out and mail to us with 15 cents in either stamps or coin and we will send this superb Catalogue—the finest ever published—all charges prepaid. 15 cents is all we ask although the actual postage is 26 cents and each catalogue costs us almost a dollar to publish.

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Montgomery Ward & Co., Chicago.

Enclosed find 15 cents for which please send as soon as possible Catalogue Number 71 for Fall and Winter of 1902-1903.

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Montgomery Ward & Company, Chicago

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YOU CANNOT DENY ACTUAL FACTS

A Wonderful Growth of 360 Pounds in 160 Days By a "Runt" That Had Been Badly Stunted for Nearly 2 Years and Only Weighed 60 Lbs.

DOW CITY, IOWA.

International Stock Food Co., Minneapolis, Minn.

DEAR SIR:—I have a runt 2 years old which only weighs 60 pounds. It stands 18 inches high, 42 inches long, and 4 inches wide on widest part of the back. I would like to try "International Stock Food" and see if it will make this runt grow. Four of my neighbors owned it before I got it, and none of them could make it grow. I enclose a photograph which shows this hog is too weak to stand alone, and it will not eat.

F. C. HOWORTH.

DEAR SIR:—I enclose a photograph of the "runt" taken five months after our commencing to feed "International Stock Food." It weighs 420 lbs. and has developed into a fine looking hog. "International Stock Food" is a remarkable preparation for making hogs grow, and the two photographs I mail are positive proof. Yours truly, F. C. HOWORTH.

"International Stock Food" is prepared from Herbs, Seeds, Roots and Barks.

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WE WILL GIVE YOU \$14.00 WORTH OF "INTERNATIONAL STOCK FOOD" IF BOOK IS NOT AS REPRESENTED.

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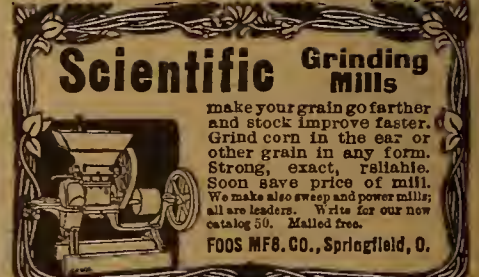
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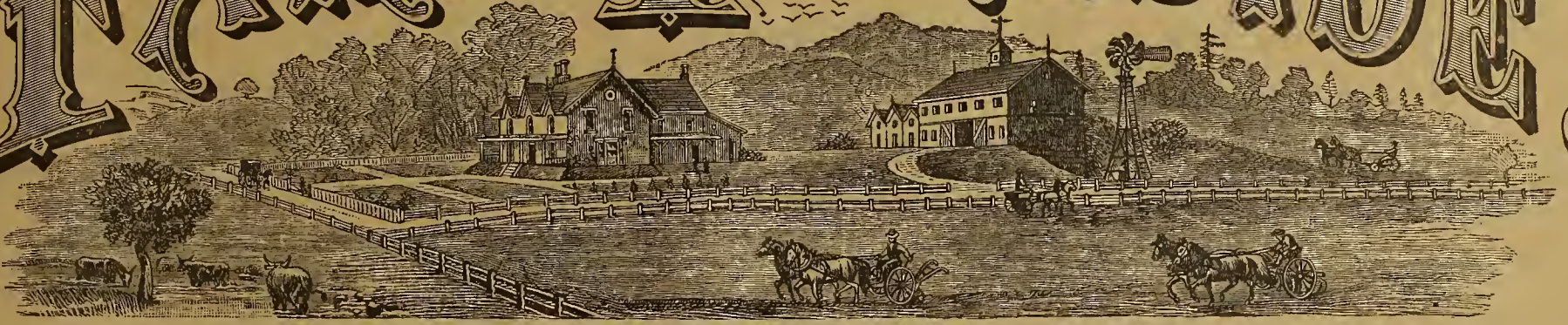
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FARM AND FIRESIDE



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SEPTEMBER 15, 1902

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COMMENT

THE DOT CONTEST

Owing to the fact that this issue of the FARM AND FIRESIDE goes to press before September 1st, the date on which the contest closes, we are unable to announce the names of the winners of the Dot Contest in this number. The full and complete announcement of the results in the contest will appear in the October 1st number of the FARM AND FIRESIDE.

PALM-OIL AND OLEO

The oleo-makers were quite confident that they had discovered a way to evade the tax on oleo colored artificially. They proposed to use palm-oil as one of the ingredients of oleo, claiming that the resulting yellow color of the product would be natural instead of artificial. After hearing their arguments, and testing samples of crude and refined palm-oil, the commissioner of internal revenue has made a strong decision against them. His decision is, in part, as follows:

"This sample [crude palm-oil] was examined and subjected to chemical analysis in the office laboratory. It was found to contain a large amount of free fatty acid, it was by no means free from disagreeable odor and taste, and was of a very deep red or orange color. If oil like the sample was used in any considerable quantity as one of the fatty ingredients it would undoubtedly cause a condition under which this office would rule that the oleomargarine contained an ingredient deleterious to public health and offensive in taste and odor.

"After this second sample [refined palm-oil] had been submitted, and the matter was under advisement in this office, fullest opportunity was given for hearing

AFFAIRS OF NOTE AND MEN OF MARK

and oral argument by you and others interested upon the subject of the use of palm-oil in the manufacture of oleomargarine. As a result of the examinations made of sample oil submitted, it was virtually agreed at the hearing that palm-oil of the grade of the samples examined could not be introduced into the manufacture of oleomargarine in considerable quantities, as oleomargarine-oil, neutral oil, cotton-seed oil, butter or milk are now introduced, but only in quite small quantities or proportions. It was further found by examination in this office that, taking any given quantity or unartificially colored oleomargarine, if three tenths of one per cent of the palm-oil submitted was introduced therein it would give to the finished product a shade of yellow, and that the finished product would in appearance be an imitation or semblance of butter. In other words, that if to the finished sum-total of uncolored oleomargarine in weight fifteen hundred pounds there was added a little less than five pounds of this palm-oil, the result would be a marked change in color, there being secured through the introduction of the palm-oil to the finished product a shade of yellow, causing the finished product to look like butter.

"Under the law a tax of ten cents a pound is assessed against oleomargarine until it is free from artificial coloration that causes it to look like butter of any shade of yellow, in which case the tax is one fourth of one cent a pound.

"This office rules that where so minute and infinitesimal a quantity of a vegetable-oil is used in the manufacture of oleomargarine as is proposed to be used of palm-oil, and through its use the finished product looks like butter of any shade of yellow, it cannot be considered that the oil is used with the purpose or intention of being a bona-fide constituent, part or element of the product, but is used solely for the purpose of producing or imparting a yellow color to the oleomargarine, and therefore that the oleomargarine so colored is not free from artificial coloration, and becomes subject to the tax of ten cents a pound."

ALFALFA IN KANSAS

In a recent special report Secretary F. D. Coburn tells of the great and steady increase of the acreage in alfalfa in Kansas during the past dozen years. He says, in part:

"Timothy has been alfalfa's leading competitor in area until this year, when the returns proclaim its field is thirty per cent smaller than that devoted to alfalfa. It is an interesting fact, also, that as early as the fourth year of alfalfa's statistical record (1894) its area exceeded by twenty-four thousand acres that of the clovers for the same year, and each canvass since has shown an increased difference in favor of the former. Indeed, statistics indicate that for Kansas alfalfa is being found superior to timothy or clover by those who have had experience with them. It not only is a perennial legume, of unusual powers of resistance to protracted dry weather, as against timothy and the biennial clovers of less fortitude, but annually yields from two to three times as much feed equally or more nutritious, and is a remarkable soil-renovator besides. These facts in large measure account for the marvelous increase in appreciation and sowing of alfalfa, as disclosed by the figures. In 1891, of the tame grasses, alfalfa ranked fifth in area, with 34,384 acres; in 1902 first, with 458,493 acres, a gain of 424,109 acres, or 1,233 per cent, and an increase over 1901 of 139,351 acres, or 43.66 per cent.

"Timothy and clover as hay-plants have been long and favorably known in the agriculture of the United States, and occupy a high and well-earned place in the list of such wherever grown, and alfalfa, their superior, is a rich acquisition to a region where it flourishes so abundantly. The statistics give indisputable evidence that under Kansas conditions alfalfa is proving to be the most valuable of her forage-plants, which in nowise detracts from the well-known merits of others, but emphasizes the desirability of extending its culture in a state where live stock and meat production are chief factors of its prosperity."

Oliver Wendell Holmes, recently appointed associate justice of the United States Supreme Court, to succeed Justice Grey (resigned), is the only son of Dr. Oliver Wendell Holmes, and was born in Boston in 1841. He was graduated from Harvard in 1861. After the Civil War, in which he made a brilliant record, he studied law, and was admitted to the bar in 1866. In his legal career he has become distinguished as law editor and author, orator and jurist. In 1882 he became associate justice and in 1899 chief justice of the Supreme Court of Massachusetts.



Major-General Jacob H. Smith, who was tried by court-martial in Manila on account of the "kill and burn" orders issued to Major Waller, and found guilty as charged, has not only been reprimanded by the President according to the sentence, but has also been retired from the army. General Smith seems to be one of those impulsive unfortunates who are apt on occasion to say much more than they mean. By "loose and violent talk"—by words not literally meant—he drew a cloud over an honorable war record of more than forty years of service.



Andrew Dickson White, whose resignation as ambassador to Germany will take effect in November, is a native of New York State, a graduate of Yale, and was the first president of Cornell University. Dr. White is a striking example of the scholar in politics, and all his honors in that line came to him not as a politician, but on account of his high standing as an educator, historian and publicist. In the diplomatic service of his country he has displayed ability of the highest order. He served as minister to Germany from 1879 to 1881, minister to Russia from 1892 to 1894, and was appointed ambassador to Germany in 1897.



In a proclamation on the death of James McMillan, United States senator from Michigan, Governor Bliss says:

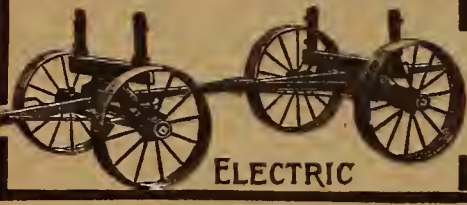
"Death came swiftly and very unexpectedly, with one stroke ending the active and highly honorable career of one of the most eminent of Michigan's many illustrious public men. But slightly past the sixty-fourth birthday, in the maturity of a vigorous life, he had the promise of many years of useful service, and his untimely demise will be generally regretted. A self-made man, resolutely he climbed the ladder of success in both business and public life, at all times clear of head and keen of judgment, a man to be depended upon, a true friend, honest of purpose and fair in his dealings with all men. In his home relations, where American manhood is at its best, he was a loving husband and a devoted father.



"Thrice elected to represent this commonwealth in the United States Senate, by very force of character he became a leader in that august body, applying to the solution of the problems of legislation the sharpened judgment of a business man, and bringing to the execution of the tasks intrusted to him executive ability of a high order. His death is a distinct loss to the nation as well as to the state."

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The man who has had experience in running a wagon knows that it is the wheels that determine the life of the wagon itself. Our **ELECTRIC STEEL WHEELS** have given a new lease of life to thousands of old wagons. They can be had in any desired height, and any width of tire up to 8 inches. With a set of these wheels you can in a few minutes have either a high or a low down wagon. The Electric Handy Wagon is made by skilled workmen, of best selected material—white hickory axles, steel wheels, steel hounds, etc. Guaranteed to carry 4000 lbs. Here is the wagon that will save money for you, as it lasts almost forever. Our catalog describing the uses of these wheels and wagons sent free. Write for it. **ELECTRIC WHEEL CO., BOX 96 QUINCY, ILLINOIS.**



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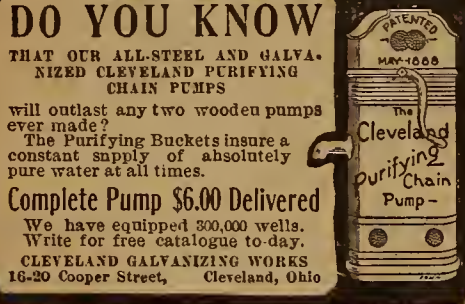
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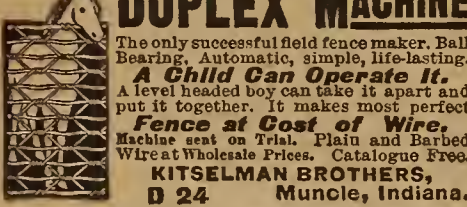
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Mr. Greiner Says:

PLANT-BREEDING.—A reader asks me how the "potato or multiplier onion" originated. Undoubtedly by breeding. If every multiplier onion were exterminated now it would not be a hard task to breed up a new race from any of our ordinary seed-onion varieties. You will notice in any onion-field specimens that have split in two or more parts—in other words, show some inclination toward increase by division of the bulb. Here is the starting-point. By continued selection in the progeny of such specimens, of bulbs which have more than one heart or core, and for that reason split up into two or more plants, a race of confirmed multipliers may sooner or later be evolved. Top-set onions—that is, onions which bear little bulblets in place of the flowers and seed of ordinary onions—may be bred up from any of our common onions. More difficult problems have been solved by our scientific plant-breeders; and even more striking results have been obtained by chance selection.

ROBIN-REDBREAST.—A Canadian reader protests against my calling our native robin "English" robin, and I think with good reason. I have sometimes heard it spoken of by this name, and thus inadvertently used it. I well remember the time, when, as a thoughtless lad of about a dozen years, I used to catch with all sorts of home-made devices the European robin or "redbreast," a small song-bird easily baited with ripe elderberries in October, and also remember my regret and deep remorse when occasionally finding one in one of my snares with leg broken. This European redbreast is a favorite pet for cages or rooms, and often becomes very tame. We find this bird over a large part of the European continent as well as in England, and its proper name should be "European redbreast" rather than "English robin." The name "English" is also used as a prefix to "sparrow" to designate the most common wild bird of all Europe, the "domestic" sparrow, which ought to be known as the "European sparrow."

SCIENCE AND FARMER.—"Every fruit and vegetable on the market to-day," says the "California Fruit Grower," "has been so improved by science that its ancestors would hardly recognize the family resemblance. For example, the blackberries and strawberries which are so luscious when served with cream at our breakfast-tables are the cultivated children of wild berries which grew rank and bitter by the wayside. The apple, too, was produced by patient experiment and repeated crossing from the sour crab-apple of the wilderness. . . . The tomato was brought to this country in 1829 from . . . San Domingo. Science bred pulp into this garden ornament, and made one of the best of edible vegetables. In a similar manner the carrot, the horseradish, the turnip and the potato were converted from plants with thin, dry, woody roots, unfit for food, into the present article of commerce bearing those names. . . . Selection and cross-breeding do as much for plants as they do for animals." With many of our fruits and vegetables we have now reached a state of perfection which seems to leave but little chance for still greater and striking improvement. Thus it is particularly with the tomato. Yet many gardeners even now are not satisfied, and keep up their efforts for the production of something still better. Chance often comes to the aid of science in such efforts of improving fruits and vegetables, and the way for the discovery or evolution of something that will prove a lasting blessing and benefit to producer and consumer is open to everybody, not alone among those scientifically inclined or trained, but to every ordinary gardener and farmer. All he has to do is to keep his eyes open. In many lines of fruits, and possibly vegetables, we are yet way back near the starting-point. It is time that efforts should be made for the improvement of such of our native wild fruits as elderberries, huckleberries, barberries, and many others.

SCHOOL MATTERS.—Surely "the schools of a community are an accurate reflection of the mental status of that place." The days when anybody could expect much success in life, or in any calling, even that of the farmer, without a good education have long since passed. Rural communities, in fact, need as good schools as cities or villages, and farmers' children will be helped by a good education fully as much as, or possibly even more than, the children of city people. The successful farmer of to-day has to solve and understand a good many problems—mechanical, chemical or otherwise—which he will never be able to fully comprehend without a good school education. For that reason I believe the money expended in rural districts for good schools and good teachers is money well spent, and as one of the trustees of one of the most important common district schools of the state, employing three teachers, I act in accordance with that conviction. The people in my district are with me in this matter. I know of smaller districts around us, however, where the first consideration of the trustees seems to be to run the schools on as cheap a basis as possible. Teachers are selected on the principle of giving the job "to the lowest bidder." This mistake will have its own punishment. It puts the entire school system of the community on a low plane, and must finally result in retarding or checking the natural tendency to moral and mental progress in that community. Education comes high, it is true. We have usually spent about fifteen dollars for each scholar per annum. Niagara Falls is said to expend nearly forty dollars a year for the education of each pupil. We have come to the point where we shall greatly raise our present figure by giving better school facilities and employing better teachers. For the coming year I expect that each pupil will cost us over twenty dollars for his or her schooling. And such improved schooling will pay, not only to the scholars themselves, but also to the community at large.

Mr. Grundy Says:

RAPE.—A few weeks ago I wrote about sowing Dwarf Essex rape among sweet-corn that stood rather thin on the ground. That corn is now in the roasting-ear stage, and I am cutting it for feed, and the rape is about a foot high, and will do to cut when the corn is finished. I sowed a small quantity of rape among dent corn at the same time I sowed the other. The dent corn is about eight feet high and a good stand, and the rape is almost invisible. The shade is too dense for it, and it will not amount to anything.

THE CORN CROP this year is simply immense. The season has been just right for it. The floods of rain drowned out some that was planted on bottom-land, but that will scarcely be a drop in the bucket out of the immense yield on thousands of acres planted. The loss in the bottoms is doubly offset by the great increase of yield on the hills, brought about by the very rains that flooded the bottoms. I never saw corn grow faster than it did this year. Where any kind of manure was used that is quickly available the stalks stand twelve to fifteen feet high, and the ears are very large. I am satisfied that the price will be a paying one, because the cribs everywhere are empty and there is a good crop of pigs and young steers preparing to convert thousands of bushels into pork and beef. Because the crop of corn is great it is to be hoped that farmers will not overlook the feeding value of the stalks. One of our best feeders has said that the stalks cut at the proper time and well shocked are one third of the crop. He has fed enough shredded and unshredded fodder to know its value, and he declares emphatically that it is the equal of good timothy hay. Cut and shred the corn fodder for the farm stock, and sell the hay. Both horses and cattle will winter in good shape on corn fodder with the nubbins left in.

BEARDLESS BARLEY.—Last spring I sowed some beardless barley in a young orchard to keep down the weeds. The early part of the spring was rather droughty, and the barley made a slow growth and failed to stool out as I expected it would, consequently the stand was poor. The heavy rains came just as it began to head. When ripe it stood about fifteen inches high. It was mowed and put up for hay. I notice that horses and cows are very fond of it and eat it up clean. This season it ripened at the same time as winter rye and was off the land early enough for cow-peas, which would have been sown but for the continued heavy rains, which kept the soil too wet to be plowed until the sowing season was past. After the barley was removed a heavy growth of grass covered the ground, and this will be turned under when the land is dry enough to plow.

Beardless barley has been praised to the skies as a grain crop, and also as an early feed crop, and I sowed this patch just to see what there is in it. The season proved unfavorable, and the experiment was largely a failure and altogether unsatisfactory. I have learned that this barley is about as early as rye, and that it makes excellent stock-feed when cut and put up as hay. Also that it will take much more rain after it is cut without material injury than hay or oats will. The yield is not so heavy as oats sown at the same time. But as I have said before, a single test proves but little. Another year the droughty conditions that extended over from last year will not prevail, and the growth may be all that any one could desire.

FARMS CHANGING HANDS.—I notice that a great many farms are changing hands this year. Some of the buyers are active farmers who come from the older sections of the country. In some cases the land they have been tilling is neither so fertile nor so easily farmed as the land they are buying. In other cases the buyers are men who have sons now ready to begin for themselves, and they are buying farms for them. In quite a number of instances the buyers are professional landlords who are investing a surplus in more land to rent to tenants. I have seen quite a number of fine farms recently fall into the hands of this latter class. A farm near me, that has been held by a tenant for a number of years, has just been purchased by one of these men, and a few days ago I met the tenant and asked him what rent he expected to pay the new owner. He said he had just received notice that his terms are one half the crops and one dollar an acre. He says he has decided to give up the farm, because he has been making but little for himself under the old lease, which calls for two fifths of the crops, and he feels sure that he would starve under the new terms.

Some of the men who are selling these farms are well along in years, and feel unable to manage them any longer. They bought the land when it was raw prairie for from five to fifteen dollars an acre, have raised their boys and girls on it, and seen them depart to seek homes of their own—generally in the towns—and being unable to make more money from it the farm no longer has any attractions for them. The farm never has been a real home to many of them, but merely a place to scramble after money, and they are leaving it without regret. The farms of the real home-makers—those who bought land for the purpose of establishing permanent homes for themselves and their families, surrounded themselves with conveniences and comforts, and enjoyed life as they lived—are not for sale. Not only they, but their children, also, love the old home and farm, and no price would tempt them to sell it, because it is a part of themselves. These are the people who made the farm attractive to their children, and in so doing made it attractive to themselves. These are the people who improve and beautify and are always at the front in efforts to improve their neighborhood, to instruct and uplift their neighbors, to make good roads, secure free rural delivery, have telephone connection with the village and their neighbors. They are leaders in all that is good and beneficial.

All Over the Farm

TILE FOR UNDERDRAINAGE

THERE is no need of caution concerning the use of soft tile for underdrainage. I grant that it is a matter of opinion only, but it is probable that many underdrains will be short-lived because the material used was too soft. It is a short-sighted policy on the part of tile-burners to dispose of any tile that has not been burned hard enough to make it absolutely safe. There is less loss in a soft-burned kiln, because the warping and cracking is less, and burners do not burn hard unless there is an absolute demand on the part of purchasers; but it is reasonable to believe that the hard-burned will outlast the soft-burned. I know that this is true of mains that cannot be put below the frost-line for any reason, as is shown by the crumbling of very soft tile during a winter above ground. But no matter how great the depth, the presence of air and water probably will finally cause tile to give way. It is too porous. The claim was made formerly that tile should be porous to admit the water in the soil, but we know now that this is entirely unnecessary. The most of the water enters the drain at the joints, and it can do this easily, no matter how tight we may seek to make them. Tile should be burned sufficiently hard to remove any particular danger of breakage in handling, either in hauling, laying or covering. In the case of soft tile there is constant danger that a piece may be damaged without the workman's knowledge in laying or covering, and a single flaw in the drain may render it useless. It is not business to buy any drain-tile that is not hard enough to stand a lot of strain or that is so porous that the least frost weakens it. Use strong drain-tile.

LATE SEEDING OF WHEAT

Last fall many farmers delayed their wheat-seeding on account of the Hessian fly. This insect had done great damage the previous two years in the Central states, and the idea was that we could escape its ravages only by waiting until its time of depositing eggs was past. The season, however, was not favorable to plant-growth in many sections, on account of dry weather, and the wheat did not make its usual growth before winter. It was found, also, that the fly had disappeared in many localities, making the delay in seeding unnecessary. Probably an early frost had much to do with preventing the appearance of a brood of fly. Thus results combined to make many farmers dissatisfied with late seeding, and the general expression of opinion now is that we should go back to the early dates for sowing wheat. It will be a mistake to go to the extreme and sow wheat as early as was the rule ten years ago. While such seeding may escape the fly this fall, it will help to hasten the time when we shall have as much fly as ever and shall lose crops again. There is a middle, reasonable ground in this matter. We do not want to furnish breeding-grounds for the fly any earlier in the season than is necessary. On the other hand, we must have sufficient time for a good fall growth of wheat. The rational way is to have the land sufficiently well prepared to push growth with little rainfall, and then to sow as early as is necessary to get the growth. That date varies with the latitude. If one is quitting the late seeding, he need not go to the extreme the other way, but may choose a medium date, that will give sufficient start for plants before winter and yet keep the breeding-time for fly in wheat reduced as much as is practicable.

FARMERS' INSTITUTES

There is a disposition on the part of a few people to criticize the farmers' institutes sharply because some of the lecturers are not fully capable. The claim is made that there are men sitting in the audiences that know as much about the subject under discussion as does the speaker, and that such men are not benefited by the meetings. This is true, and their number will increase, because there is no reason why thousands of farmers may not keep as fully abreast of agricultural progress as a majority of those who can be secured to discuss farm-problems at institutes. The number of scientific investigators who are able, and willing, to address gatherings of farmers is limited, while the demand for meetings is increasing. The masses like an address from a practical man, and the fact that one man or ten men may know as much as the man who is selected to make the address is no reason that the great majority of the audience should be deprived of the profit they could get from that address. It is not the needs of the few most progressive men in a community so much as the needs of the mass who have not studied deeply that should be considered, and directors of institutes do well to send practical men to help them in their thinking, even if the men sent cannot add to the fund of knowledge possessed by a few who are attracted by the meeting. If there was an abundance of lecturers standing up so far in front that they could instruct all the rest of mankind the situation would be ideal, but such men are few in number. There are many who can help to straighten out the thinking of the masses, and they are in place on the institute platform when more capable men cannot be secured. Sincerity, courtesy and a knowledge of some facts wanted and needed by a majority of the audience, with some facility in imparting knowledge, are satisfactory credentials for an institute lecturer.

DAVID.

THE MANURE-HEAP

While some farmers are building up their land, others are pulling theirs down. Some farmers sell manure. They usually do it as an "accommodation" to some one who wants a few loads, or else they make no bones of stating that they want the cash. Manure means future fertility to the soil, as well as returns for the present crop, and fertility to the

soil means the life of the farm. Seldom is there a time when a good excuse can be offered for selling a load of manure from the farm.

A man living near me has a five-acre farm-lot. In addition to putting in a crop each year he works out with his team a large part of the time. He has two horses and a cow. Every year he sells a large pile of manure at a nominal price. For two years I have purchased it myself, paying him fifty cents a load at his stable door. I have asked him why he sold it instead of enriching his land, which, by the way, is not rich. His land, he said, was as rich as need be, and he wanted the money. So he goes on, year by year, growing medium yields of ordinary rough crops, when there is a good demand for fruit and garden truck, which he might grow and sell, and at the same time gradually get his plot of ground into a condition when his crop would be worth ten times what he now raises upon it.

The manure-heap is sometimes the cause of spreading plant disease on the farm. Where plants are affected by fungous diseases this may be the case, since the spores usually thrive in manure. Care should be taken to keep affected plants out of the manure-pile. As an instance, experience has shown that the fungus affecting watermelon-vines, known as "wilt," will live in a barn-yard for years, and that all manure taken out will inoculate ground never before planted to melons.

GUY E. MITCHELL.

BASIC SLAG AS A FERTILIZER FOR WHEAT AND GRASS

About the year 1883 the now well-known basic slag, or Thomas phosphate powder, was introduced to the agricultural world. It is the residual slag resulting from the treatment of the iron-ore by the Thomas-Gilchrist process of adding lime in order to remove the phosphoric acid and silica.

Thomas phosphate, or basic slag, is now extensively used in Europe by fertilizer manufacturers as a substitute in part for the imported phosphate rock. This is more especially the case in Germany, where the total consumption of basic slag in 1896 was estimated at three hundred thousand tons.

The use of this fertilizer is being rapidly extended in Europe, and its use in this country is sure to increase as soon as its real value to grain-growers is more generally appreciated. The large percentage of phosphoric acid it contains becomes available gradually without the addition of sulphuric acid, which is so necessary in converting phosphate rock into superphosphate. While basic slag is nearly as valuable as a source of phosphoric acid as the other, the cost is less by several dollars a ton, and its use in wheat-growing compares favorably with superphosphate. It is even more beneficial, because it carries with it from forty to fifty per cent of lime.

The production of basic slag in the United States is very limited. The principal factory is located at Pottstown, Pa. At present Germany is using five hundred thousand tons of superphosphate and four hundred thousand tons of basic slag annually.

The fertilizing value of basic slag, or Thomas phosphate, must be ascribed as being very largely due to the ready supply of lime when the slag is brought in contact with the moist soil. If there is plenty of water in the soil the immediate benefit is more marked. When slag fails to produce any practical results on certain soils the failure is probably due partly to a deficiency of water and partly to the absence of that excess of vegetable matter which is necessary to produce an acid solvent. On certain soils rich in vegetable acids, but poor in lime, the practical results of basic slag have proved so beneficial that scientific authorities have been compelled to recognize its value. The well-known beneficial action of lime on clay soils is explained by the power which this substance possesses of flocculating or rolling into balls the clay particles, thus opening the pores of the soil and permitting the more free circulation of water.

In a three-year rotation basic slag is especially valuable. Prepare the wheat-land early, fine the soil, and sow broadcast three hundred pounds to the acre, and harrow it in previous to drilling in the wheat. At seeding-time one hundred pounds of superphosphate, or guano, would be beneficial in giving the wheat-plants a good start. In the spring it will pay to sow broadcast on each acre thirty pounds of nitrate of soda, or the same weight of either dried blood or the sulphate of ammonia. Either of these will cause the young wheat-plants to grow vigorously. The amount of phosphoric acid needed for the production of the wheat crop will be gradually supplied by the basic slag. Several formulas are recommended. The Canada Experiment Station uses five hundred pounds of basic slag, two hundred pounds of nitrate of soda and one thousand pounds of leached ashes an acre at seeding-time. In England from three hundred pounds to four hundred pounds of basic slag and from one hundred pounds to two hundred pounds of superphosphate are used to an acre when the wheat is sown. The first formula given is undoubtedly the best one, but either will pay a good per cent on the amount invested.

W. M. K.

NEW SWINDLE ON AN OLD PLAN

A new swindle is capturing some of the New York farmers. A man comes around offering a patent wagon-tongue. The farmer does not buy, but the agent leaves the tongue to be called for in a few days. Shortly another of the gang comes and sees the tongue, is very favorably impressed with it, and offers four hundred dollars for it. The farmer thinks he sees his chance to make some money, sends the first man two hundred and fifty dollars for the right to handle the tongue, and that is the end of the matter. Man No. 2 disappears and seeks new fields to conquer.—The Farm Journal.

A BENEFIT TO FARMERS

The benefits that will undoubtedly result to farmers from the recent incorporation of the International Harvester Company, which took over the business of the five leading harvester manufacturers, have probably not been considered by a large portion of the farming community.

The economical necessity of a consolidation of the interests of manufacturers and those of their farmer customers must be apparent to any one who understands the present situation.

The increased and increasing cost of material, manufacturing and selling—the latter in consequence of extreme and bitter competition between manufacturers and their several selling agents—has made the business unprofitable.

The two alternatives left for the manufacturers were either the increasing of the prices of machines or the reduction of the cost of manufacture and sales. The latter could only be accomplished by concentrating the business in one company.

As can readily be seen, the forming of the new company was not a stock jobbing operation, but a centering of mutual interests. There is no watered stock; the capitalization is conservative, and represented by actual and tangible assets. There is no stock offered to the public, it having all been subscribed and paid for by the manufacturers and their associates.

The management of the International Harvester Company is in the hands of well-known, experienced men.

The officers are: President, Cyrus H. McCormick; Chairman Executive Committee, Charles Deering; Chairman Finance Committee, George W. Perkins; Vice-Presidents, Harold F. McCormick, James Deering, Wm. H. Jones and John J. Glessner; Secretary and Treasurer, Richard F. Howe. The members of the Board of Directors are as follows: Cyrus Bentley, William Deering, Charles Deering, James Deering, Eldridge M. Fowler, E. H. Gary, John J. Glessner, Richard F. Howe, Abram M. Hyatt, William H. Jones, Cyrus H. McCormick, Harold F. McCormick, George W. Perkins, Norman B. Ream, Leslie N. Ward, Paul D. Cravath.

The International Harvester Company owns five of the largest harvester plants in existence—The Champion, Deering, McCormick, Milwaukee and Plano—plants that have been producing nearly, or quite, 90 per cent of the harvesting machines of the world.

It also owns timber and coal lands, blast-furnaces and a steel-plant; it has a new factory in process of construction in Canada.

It is believed that the cost of producing grain, grass and corn harvesting machines will be so reduced that the present low prices can be continued, and that consequently the results cannot be otherwise than beneficial to the farmer. To maintain the present prices of these machines means to continue and increase the development of the agriculture of the world, for no one cause has contributed or can contribute more to this development than the cheapness of machines for harvesting grains.

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EXPERIENCE WITH PRIZE CROPS

SOME time ago I read a communication from one of your contestants for the corn prize, and expected to see more from contestants for the corn and other prizes, but have not, so I will give my experience. I have entered for both the bean and corn prizes.

I had a small piece of ground that was wet and sour. Several years ago I broke it up and planted it. Last fall it was covered with a dense growth of weeds. I turned it under with a disk-plow while the weeds were green. This spring I cut it up with a disk, covered it with manure, and harrowed it. I planted the prize corn May 9th, using a corn-planter, and drilled the corn in with fertilizer. The spring was very dry, and the seed germinated very slowly and irregularly. It was three weeks before the first and last corn appeared. I had sixteen rows thirty inches apart, with a corn-stalk six to twelve inches in the row. It did not look very promising. My Pekin ducks got in and nipped the corn-stalks off, and then later a Jersey calf broke out of pasture and gave the corn another trimming, and my field of prize corn looked like the Ohio volunteers after the Battle of Bull Run, when Sunset Cox "led the advance on Washington." It was ragged and scattered, but I kept giving it attention and light cultivation with a Planet Jr. cultivator. I cultivated it six times, and hoed it three times during the dry weather; then the rains began to come in June, and I wish you could have seen that corn jump. July 9th it began to tassel out. July 18th came a terrible wind and rain storm, and laid the corn flat. It looked as though a roller had run over a part of it. After this third disaster I felt that as a prize-winner I was not in it so far as that piece of corn was concerned, but in three days it was up and at work. Some of it is bow-legged, but oh, what corn! I nursed each stalk like a mother does her first-born baby, cut out all the suckers, and took out all the weak and barren stalks. Some stalks have put out six ears, four of which have silked. Every stalk will average two ears to the stalk, and some ears from the stalk to the silk measure thirty inches, and are hanging down low and touching the ground. I may not win the prize, but I will have some of the best corn ever raised in Ohio. I want to enter a bushel at the state fair as corn grown from seed furnished by the FARM AND FIRESIDE.

I have learned many things from watching and studying that field of corn, the most important being that farmers attempt to cultivate too much land. I can raise as much corn on an acre as some farmers do on twenty.

I planted the beans in the same piece of ground with the corn. I have seven rows, eighteen inches apart. The bean is one of the most prolific growers I ever saw. Perhaps good ground, fertilizer and frequent cultivation have something to do with it. I have four hundred stalks of corn, and expect to raise eight bushels; from one pound of seed I will get from eight thousand to ten thousand pods off the beans. If I do not win a prize, I have learned enough to repay me for all my labors.

SHARON.

CLASSIFYING

We are governed very largely by our eyes. Upon their evidence we pass judgment. Therefore, we farmers who are sellers cannot afford to disregard effects that appeal to the eye.

Every thing looks best in its own class. Often I have felt well enough dressed in the country among my own class, but in wearing the same clothes in the city have felt that I was out of assortment with the men whom I met there who were better dressed.

FROM MICHIGAN.—In this section of the state wheat, rye and grass are at par. The great drought last fall and winter was very favorable to clay land, and equally unfavorable to sandy land, but an abundance of rain last spring rushed the sandy land to excellent crops. The country has never had better crops. Fruit of all kinds is abundant. I wish to say that opportunities to buy lands, improved or unimproved, and to make good homes in a most healthful country, could hardly be better. Our land is all timbered land. A little of it is pine-stump land (some of which is good soil), but most of it is maple, beech, elm, oak, linden and cherry land.

H. C. P.

Big Rapids, Mecosta County, Mich.

FROM KANSAS.—We farm differently here from what they do in the Eastern states. We raise no clover or timothy hay, never plow ground for corn, and but little for wheat. Still the farmer who does not raise more than one thousand bushels of wheat has a little crop. I know of farmers who raise ten thousand, fifteen thousand, and some twenty-five thousand, bushels of wheat. We list our corn, tend it with knife-sleds first, next disk-sleds, then cultivate. We list nearly all ground for wheat, then sled it once. Some drill without doing either. We raise some Kafir-corn, sorghum and alfalfa on river bottoms or hard land. Nearly every farmer here that is a worker is making money.

E. J. P.

Greatbend, Barton County, Kan.

FROM INDIANA.—The FARM AND FIRESIDE has been in our home for more than twenty years, and has always been a welcome visitor. I like the new arrangement well, and recognize an old friend in a new dress. I have but one objection to the paper, and that is that it does not come often enough. The crops in this part of the state are fine. We live on the edge of a large soft-coal field, and there are several large mines going down. A great deal of land is being sold, leased or optioned. When sold the price ranges from forty dollars to fifty dollars an acre; when leased for the coal only from thirty dollars to thirty-five dollars. Other lands sell for from twenty dollars to one hundred dollars an acre.

J. N. W.

Carlisle, Sullivan County, Indiana.

FROM TEXAS.—If agreeable I would like to suggest that writers on farm, garden and orchard topics state the nature and quality of soil and subsoil; the growth of the products—quick, strong, luxuriant; also as to heat and drought-resisting qualities. The reason is that I am engaged in the fruit and garden business. I will give as explanation the nature and character of soil that is called "black wax." The subsoil is a white rock or chalk formation eight to twelve feet deep. The main point is that trees with a long tap-root die of root-rot. In the next place, this is a high, open country, and the wind blows hard and almost incessantly. Fruit-trees must be low or the fruit will be all whipped off. In the next place, owing to the hot, dry weather, the tree must be of vigorous growth and branch out near the ground, so as to shade the ground around the roots, as the hot sun in summer will burn the bark off and kill the tree. I have used the word dry. In 1901 it rained the eleventh of May, then the thirteenth of September. We had no other rain until the eleventh of April, 1902. What think you of dry? People hauled water for over six months, and are still hauling. Last year was an extreme one. But this is a dry, windy country.

Rev. R. M. W.

Ovilla, Ellis County, Texas.

FROM NEBRASKA.—Redwillow County is in the southern tier, seventy miles east of Colorado. I have farmed over fifty years; been here over twenty. Some years crops are good, and some years light. I have raised wheat here that made

In the Field

Some time ago my wife, who has always had a rare reputation for picking out the best of everything, after a visit to our cow-barn, said to me, "Where did that ugly, spotted old cow come from which you have out in the barn?"

"I bought her to fill a temporary vacancy," I replied.

"Well, she is very much out of place there among our nice Jerseys, and I wish you would sell her."

I always agree with my wife. If I do not have an immediate reason for doing so I hunt one, for I know she is right. I made a special trip to the stable to look up the case of the condemned cow. She was far from matching the pretty cows on each side of her, and she looked worse for being out of her class.

When the cow-buyer came along he got a bargain in the "spotted old cow." As I said, she looked out of place in the stable with the Jerseys, but when I saw her being driven away in company with a dozen of her own class her appearance improved fully fifty per cent, and I felt that I had sold her too cheaply. My wife met this lamentation on my part with the comforting observation, "You never should have bought her."

So in all our farm products the harmony of assortment should be observed. In the pig-pen we have all seen the runt discount the looks of the whole litter. Remove the runt and that pen immediately goes into another class, and somehow or other the unfortunate runt immediately improves when away from "odious comparisons." In the flock the black sheep may be a superior individual, and may plead the extenuation of adding color to the flock, but with him there our sense of harmony is not so well satisfied as when he goes beyond the color-line.

Last spring I passed a grocery-store in the city where strawberries were exposed for sale. A few boxes of very fine ones, assorted to as nearly one size as possible, and trimmed here and there around the box with green leaves, were marked at a high price. Next to them was another lot—big, medium and little—all in one basket, just as they came from indiscriminate picking. Many of the berries in this lot were as fine and large as the ones that were topping the market, but they were in bad company, and had to stand that discount. Another lot of assorted small ones was there, too, and priced very little below the miscellaneous lot. I passed the same store half an hour later, and the fine berries were not there. In potatoes, apples, peaches and our grains we have all seen the same lesson of contrast, and many times failed to profit by what it has taught us. We will find it pays to cater to the trained requirements of the market's eye. Not only do the big potatoes look bigger by being put in their own class, but the medium ones look much better with nothing larger near with which to compare them, and, too, on account of the harmony of uniformity.

In marketing our products we farmers, through not knowing or through carelessness, too often disregard "the looks of the thing." We do not appreciate how in the city markets the looks fix the standard. We may know that something that does not look so well is better than something that looks better; but seeing is believing with the purchaser, and it is not our business to educate the market, but to supply its demands.

It is well for the countryman to mingle critically with the townsfolk now and then; to visit the markets and stores and see how very extensively appearances make up the judgments of our city compatriots. Then, too, we may often receive a collateral benefit from this contact, by getting some useful hints as to our own classification, toward which we may "tak' a thought an' mend."

W. F. McSPARRAN.

Correspondence and Comment

over forty bushels an acre, and raised wheat that did not pay for seed and expenses. I have raised corn that made over sixty bushels an acre, and have raised corn that hardly paid for picking. This year rye is good, some fields going thirty to thirty-five bushels an acre. Fall wheat that was put in good is yielding

well, some fields making over thirty-five bushels an acre. A good many farmers have four thousand to six thousand, and some ten thousand, bushels of wheat. There are thousands of acres where the crop this year on one acre will more than pay for two acres of land. Corn and potatoes are good. The yield of alfalfa this year so far is about three tons an acre, and two crops more to cut yet. The season's yield will be five to six tons an acre. The crop this year will bring from thirty dollars to forty dollars an acre. It has brought that every year for three years past, and for ten years there has not been one when the crop would not pay ten per cent on one hundred and fifty dollars an acre. A few alfalfa farms (bottom-land) can still be had at twenty dollars an acre. Last year a few farmers tried sugar-beets on upland. They did so well that a good many planted them this year. They will go fifteen to twenty-five tons an acre, according to the care given. The contract price is four dollars and twenty-five cents a ton, delivered in McCook, the county-seat, a town of over three thousand. The crop this year will bring from sixty dollars to one hundred dollars an acre. There are a good many patches where the crop this year on ten acres will pay for one hundred and sixty acres of rich land.

W. C.

McCook, Redwillow County, Neb.

FROM OREGON—BOYS ON THE FARM.—As I am a subscriber to your paper, and have read many articles concerning farm life and ways of keeping the boys on the farm, I thought perhaps you would print a short article from one of those same boys. We are asked to stay on the farm, and yet in most cases nothing is done to induce us to stay. We work hard, and are poorly paid; we have no chance to try small schemes of our own; we have few opportunities for intellectual improvement or for amusement, and we see on every side those who have chosen other vocations receiving higher pay, dressing better and working less than we do. Is it any wonder, then, that an intelligent boy seeing all this should choose some other pursuit for life? I am a farmer's boy, and know what I am talking about. I am seventeen years of age, and have lived on a farm all my life. In the year ending December 31, 1901, I attended school two months, and worked steadily on the farm for the remaining ten months, missing in that time one day—July 4th—and often working Sundays when there was a rush of work. It was hard, steady work, too, from eleven to fourteen hours a day, of such work as sawing and splitting rails, driving posts, cutting brush and logging up new ground, plowing and digging ditches, and working in the hay-field. For this I received a trifle less than sixty dollars, which paid for my clothing, my expenses during the two months of school, and furnished all my spending-money for the year. I cannot see much encouragement in that to stay on the farm, when I possess sufficient knowledge of accounts to enable me to earn at least twice as much by clerking in a store. We read of our great opportunities for studying Nature's beautiful things, but after you have grubbed stumps till your back aches, trying to carve a field out of the virgin forest, you are not apt to see much of the beauty of the autumn woods; and a day of fatiguing labor in the hay-field is not very conducive to admiration of a grand sunset, especially when you have yet to milk eight or ten cows, and perhaps feed the calves and pigs, before you can go to bed. I have endeavored to give some of the reasons for boys leaving the farm, as seen from a boy's point of view; there are, however, a number of ways by which the boys may be kept on the farm, to the benefit of both.

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DR. JAMES WILLIAM KIDD

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Gardening

By T. GREINER

CATALOGUE DESCRIPTIONS.—Of the many instances which show how little reliance we can place on the descriptions found in catalogues I will mention one that has come to my notice, and it is in a price-list of potted strawberry-plants, issued by so old and good a firm as Vick's. Of the Rough Rider (mentioned a number of times in these columns) it says: "Color dark red, like Gandy. One of the latest and firmest strawberries in existence." Gandy dark red? Not by any means. Rough Rider has good color, however, and is reasonably firm; yet it is not one of the latest in existence. In fact, it is only about as late as the Brandywine, and not near so late as Gandy or Humm. The one fault I have to find with Rough Rider is that it has not the high quality of our best sorts, like Brandywine. These descriptions of varieties, as found in Vick's, and similar ones in other lists, may be inaccuracies rather than misrepresentations. It seems to me, though, that our leading seedsmen and nurserymen of right ought to be educators of the public, and for that reason should be extremely careful to give correct descriptions in their catalogues.

FALL PLANTING OF STRAWBERRIES.—Here at the North I have never made a glaring success in strawberries by fall planting, as can easily be done at the South. Yet I am not sure but that by means of proper management, in a favorable fall, I may be able to gather a moderate amount of very fine berries on fall-set plants next spring. I am trying it once more, by taking up some of the best-rooted runners, with a good chunk of soil adhering to the roots, and setting them in very rich and well-prepared soil. For, as Vick's list correctly advises, "it may be unnecessary to mention it, but our customers are advised to prepare and fertilize well the land to be set in strawberries; this is the important first step." If the fall is reasonably wet, and open weather continues late, the plants thus set may not only make a good root and top growth, but even produce some runners. At the beginning of cold weather I then cover the entire surface of the bed deeply with good manure, just leaving the plants exposed, or but lightly covered. If I had to set plants, whether "potted" or not, that were shipped from a distance I would pot them off again and let them make a renewed root-growth.

LARGE ONIONS.—H. J. P., a reader in Holloway, Mich., reports that an article of mine on onion-growing (appearing recently in these columns) has induced him to buy some Prizetaker onion-seed and sow it in pans in the house. After the seedlings got to be three or four inches high they ceased to grow, and he considered them worthless, but did set out a row across the garden. Now they are about two and one half or three inches in diameter, with tops still green; but he is afraid he will not get them to weigh two pounds each by frost. A friend told him to dig the soil away from the bulbs, but he is not sure whether that is right. A one-pound onion is pretty large, and I am glad enough if even a portion of mine reach that size. If every onion on an acre weighs on the average one pound, the yield, as I set my plants—namely, four inches apart in fourteen-inch rows—would come close to nineteen hundred bushels. I am satisfied if the average comes close to one half pound a bulb. However, when an onion has grown to be three inches in diameter, with tops still green, it has every chance to grow to a very large size in a few weeks' time. Please report later in the season. In hoeing or weeding onions scrape the soil away from the bulbs.

Fruit-Growing

By S. B. GREEN

GRUBWORMS IN LAWNS—DODDER ON RASPBERRIES.—The J. N. Co., Lake City, Minn. As yet I know of no practical way of destroying the grub which eats the leaves off the grass on lawns. This grub is the larva of the June-beetle. I have had much trouble from its injuries, and have carried on numerous experiments here in my efforts to stop its work, but I cannot see that any of them are sufficiently practical to recommend. I have found the best treatment for it is to keep the lawn thoroughly watered when the grubs are at their worst, when the grass seems often to be able to outgrow the harm done it by the grubs.—I have never seen dodder especially injurious in raspberry-patches. It is an annual plant, and if the ground was kept thoroughly clean from weeds each year I do not think but that it would be subdued. I am inclined to think that the party who says his raspberry-patch is being utterly destroyed by this plant has allowed the weeds to grow, which offers favorable conditions for the dodder.

STRAWBERRY-LEAF RUST—SHOT-HOLE FUNGUS—RASPBERRY-RUST—ARBOR-VITÆ.—G. M., Chesley, Ont. The strawberry-leaves to which you refer as being injured by some fungus are badly infested with strawberry-leaf rust. This may be held in check by spraying with Bordeaux mixture, but comparatively few strawberry-growers are pursuing this treatment, owing to the fact that they can generally get varieties that resist this disease. If, however, it is especially troublesome with you, I would suggest that you remove all diseased foliage from your strawberry-plants when you set them out, and then begin spraying about the middle of June, and keep the young growth covered with Bordeaux mixture throughout the summer season. This will require an application about once every two or three weeks, but when you are well equipped for this treatment it is quite simple and quickly done. In renewing old strawberry-beds I always recommend burning the foliage, providing the work is carefully done, for the reason that such treatment destroys the diseased foliage and the disease-germs, and if carefully done need not injure the roots. I have thought on this account I have sometimes had better crops from old beds than from those which were newly planted.—The plum-leaves which are full of little holes or purplish, dried spots are infested with a disease that is known as the shot-hole fungus, which is very injurious to the foliage of some kinds of plums. Bordeaux mixture is a remedy for this trouble, and should be applied in about the same way as recommended for the strawberry, but the work should begin somewhat earlier. The holes are caused by the tissue killed by the fungus drying and dropping out.—The raspberry-leaves sent on have a yellowish appearance, and look like cap raspberry-leaves from plants that are affected with rust; but you say that they are from your red raspberries, and I am at a loss to place the disease without further information from you in regard to it.—The arbor-vitæ and Norway spruce are quite easily grown from seed, but if you want only a few plants for your own use I think it would be far better for you to buy them of some good nurseryman. The small seedlings can be bought for a mere trifle, and may be sent to you by mail. The seed of Norway spruce may be purchased from J. M. Thorburn, John Street, New York City. You can obtain arbor-vitæ from the same source, though I would recommend you to gather them from Ontario trees. It is quite easily saved in the early autumn by picking off the cones from hedges or native trees, which, I take it, may be found in your vicinity. When gathered the seed should be mixed with sand and stored in a dry place. It should be sown early in spring, in sandy loam, and slightly shaded.

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Live Stock and Dairy

LAMBS A HELP TO THE FARMER

LAMBS have brought a good price all the year, and the prospect is that this will continue to be the case, for some time at least. At the present time, August 21st, the ruling price is five cents a pound in most Eastern states, live weight. Thus, the lamb which weighs seventy pounds will bring three dollars and fifty cents. This is about fifty cents more than he would have brought a year ago. It may readily be seen what a help it will be to the general farmer this year to have say twenty-five to fifty lambs. The trouble is that not all such farmers have a flock of that size, nor of any other size, in fact. For several years there has been a gradual drifting out of sheep, although the farmers were warned of the coming scarcity and the consequent rise in value. To-day there is no better property for the all-round farmer than sheep. Wool is standing high in the market, with still better prices in the near future, and for mutton there is a constant demand even beyond the expectation of the most sanguine. But many of us will be like the man who said he had just lost a thousand dollars by not having wheat to sell. We are not in a position to take advantage of the present boom, and so must sit by and see our neighbors lay by the dollars. Will this be so in the future?

E. L. VINCENT.

THE GOSPEL OF FEEDING

It is a theory well accepted among live-stock breeders that like produces like, or the likeness of an ancestor. When this theory is dissected and the latitude noted that is given in the phrase closing the sentence one may expect almost anything in the way of individuals in breeding, and find a warrant even for freaks by authority of the above theory.

It is true that we breeders put a vast deal of confidence in the performing merits of the progenitors of the strain or tribe from which we are breeding, believing that the transmission of good performance is to be depended upon. We are often disappointed, and if we follow hasty judgment we are inclined to think that we have been imposed upon by reports of good work done by ancestors of our animals, when in reality the good work was never done.

As we grow older and more experienced in the business of breeding, however, we get more used to these disappointments, and do not expect every throw to win a prize.

We have less trouble in getting like to produce like in physical outline or conformation than we have in securing the more desirable qualities, increased production, or even the ability to equal the work of the immediate ancestors.

In breeding pedigreed dairy-animals, when performance is more sought after than shape or color or mere physical structure, when the milk function is one of nervous force, we often find that the offspring does not inherit a satisfactory degree the tendencies of the sire's heredity or the dam's ability.

We therefore are forced to do the best we can in the matter of breeding, and trust to a satisfactory outcome.

I am well satisfied that we are not more able to foretell results from a given mating, because along with our careful, superb breeding here and there has been a man who has not done good feeding. I do not care how royally an animal for the dairy may have been bred, or how many generations the careful breeding has covered, in a large measure the good results to be expected from such breeding are nullified without proper and abundant feeding. As we well know, the highest production of milk is had when the cow is well and wisely fed; and it is as easily known that the growth and development of the milk-giving functions are as fully dependent on such feeding from calfhood to maturity as is performance after maturity. It is easily understood, also, that a period of starvation or insufficient feeding in the early life of the future cow may so arrest the development of the mammary functions, it may be at a critical time, and all the fine trends transmitted by heredity and careful breeding be scattered, and reversion to type undo years of labor.

So in the breeding and rearing of fine and useful animals the first lesson to learn is the most important one of wise feeding.

W. F. McSPARRAN.

GOATS FOR CLEARING FRUIT-LANDS

There is no worse animal to put into an orchard than the goat, because he is a browser of the truest type, but for preparing brush or timbered land that is to be put into orchard or any kind of fruit he has no equal. No doubt the Angora is the most profitable to keep, but any kind of scrub goat will eat brush and weeds, and this is the desirable point for the man that wants his land cleaned of all woody growth.

I have a friend in Maryland who keeps Angora goats, and who is also putting out orchards. Last year he determined to change about one hundred acres of timber-land into orchard. He fenced off about half of it, and put in a flock of some fifty goats. They ate all the weeds, leaves and tender twigs off the brush that they could reach, and barked some of the smaller stuff. In the winter he had the saw-timber cut and hauled off, and as soon as that was gone he had the remaining timber and brush cut down in windrows. The goats browsed on the tops more or less until spring, and when the new growth started they were ready for it. The kids last spring nearly doubled the flock, and the fifty acres do not furnish enough pasturage, so the bars are left down to allow the goats to go into the other fifty acres of woods. Next fall the logs and brush will be burned, and the land can be plowed then or next spring, and a crop grown to tame and prepare the land for trees next year; or, in my opinion, it would be better to let the goats run on it without plowing until about midsummer, to kill out what few sprouts may still be growing about some of the stumps. Then I would plow it and harrow in a crop of peas. This crop will pay for the plowing, and may be harvested by hogs, goats, sheep, or any stock that may be at hand to consume it on the ground.

At the present time, July 30th, there is very few of the sprouts on the stumps that are alive, and by fall there will be fewer; but to make sure of a thorough cleaning of all it will be well to give the goats until the middle of next summer to nibble them. Any one who has never seen the work of goats on stump-land ought to try it, or visit some place where it is being done. About the only sprouts the goats do not seem to relish is walnut—oak, chestnut, elm, hickory, locust, and in fact all but those of walnut are kept down to mere stubs. There is no weed refuse. Pokeweed, "jimson," ragweed, dock, poison ivy and all kinds of briars are turned into mutton and mohair. There is nothing that discourages sprouts so quickly as the everlasting whipping of their leaves and tender growth, nor is there any animal that does such a thorough job of whipping as the goat. What is too big to pull down with his feet he peels.

My friend is clearing his land at a profit, aside from the prices of timber sold, which was about five dollars an acre. He got the small timber and big brush cut for less than one dollar an acre. No grubbing will be needed. The goats have done the sprouting for less than nothing, for they have got a lot of good feed by browsing.

As Texas, Arkansas, Missouri, Oklahoma and all that region have plenty of brushy land, and there are many who will plant orchards, vineyards, etc., on it, there is no wiser plan, so far as I know, than to set the goats to work on the clearing.—H. E. Van Deman, in Farm and Ranch.

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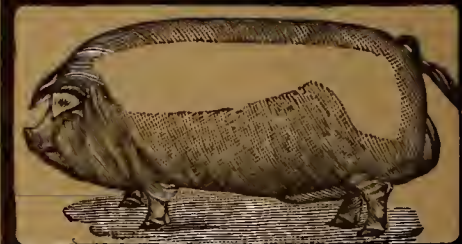
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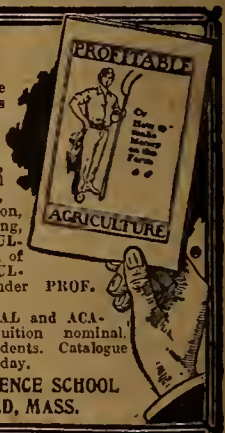
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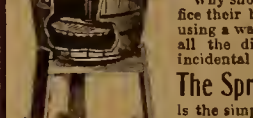
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GUY E. MITCHELL.

FEEDING AND WEANING YOUNG STOCK

All stockmen and feeders well know the high feeding value of whole milk when taken fresh from the dam. The exact bodily temperature, moderate amount consumed and thorough mixing with the digestive fluids when thus taken combine to give it a peculiar virtue not found in artificial rations, however carefully prepared.

It is true that after young stock have had a few weeks' start by feeding from the dam they will make a fairly good growth and development when fed skim-milk properly balanced with grain and roughage rations. In fact, it is seldom economy to raise calves in dairy sections from the entire milk. A prevalent mistake made by many feeders of young stock is at the weaning period. Stockmen who will use much care and excellent judgment in feeding their young animals during the first few months of their lives will often make woeful mistakes at weaning-time. A well-bred calf, pig or colt will frequently be making a live-weight gain of from one to two pounds a day when from three to four months old when with its dam or when being fed properly prepared artificial rations. Then the feeder may suddenly decide to wean it or radically change its feed. The usual result from such sudden changes of feed is to put the digestive and assimilative functions entirely out of commission, development being stopped, and often a stunting produced, which will affect the animal's usefulness throughout its entire life.

The value of the "toughening" process for young animals has become quite thoroughly exploded. Good blood, correct and uninterrupted feeding, with no weaning-time, from start to maturity will yield returns from both care and food consumed that cannot be obtained by the old-time toughening and weaning processes.

As an illustration of what adaptive feeding will accomplish one example will be given here. Some years ago the writer gave exceptionally good care to the feeding of a colt for the first twenty-nine months of its life, or until sold. The colt had a sire and dam of good breeding and performance—the former draft stock and the latter road stock. At the end of the third month the colt was taught to take a little skim-milk and a small quantity of oats and bran. The amounts fed were gradually increased until it was seven months old, when it was separated from its dam. The latter at that time was giving but little milk. The colt when removed would greedily take four or five quarts of skim-milk three times a day, and a dry feed of bran and oats, equally mixed by bulk, a quart of which was given after each feed of milk. The milk and grain feeds were continued uninterruptedly, together with bright, clover-mixed hay, until turned to good pasture the following spring. The second winter a generous, well-balanced hay and grain ration was used, without the milk, a frequent feed of green stuff being substituted. As a result of the feeding the colt was almost a horse in appearance at eighteen months of age, and was well broken and doing light driving its second winter. When two years old it was a twelve-hundred-pound horse, and accom-



COTSWOLD RAM
Owned by Colonel McRae, Guelph, Ontario

plished the half of a team's work, except that requiring heavy and long-continued exertion. At twenty-nine months it weighed close to thirteen hundred pounds, in fair condition, and brought the writer two hundred dollars in cold cash, besides having fully earned its keep during the last year.

B. F. W. THORPE.

MOHAIR

The average price of good domestic mohair can be said to be about thirty cents to forty-five cents a pound—some grades commanding less, while others command much more. The opinion prevails throughout New England that while the price for the short, cross-bred, low-quality hair will in the future be considerably lower than at present, the price for fine mohair will be higher, the tendency on the part of manufacturers being to pay lower prices for the poor stuff and higher prices for the fine hair. The present weight of clip on an Angora doe is about four pounds when sheared once a year, and that of a wether, five to eight pounds. The meat of the Angora, called Angora venison, is excellent, rivaling the sweetest Southdown in the opinion of many. Angoras are now taken readily in the Kansas City and Chicago markets, and at prices but little, if any, less than paid for mutton. Weights will average well with Western sheep. The pelts of slaughtered Angoras command when dressed from three dollars to six dollars each, and are usually reserved by shippers and sold direct to tanners and hide-dealers. The American, or home, market for the skins is far greater than the supply, and thousands of them are imported annually into this country.—John W. Fulton, before the Pacific Northwest Wool-Growers' Association.



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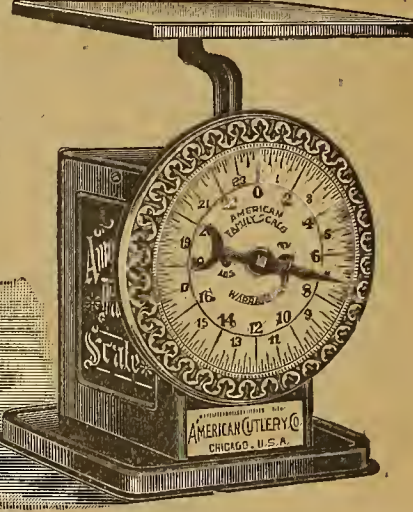
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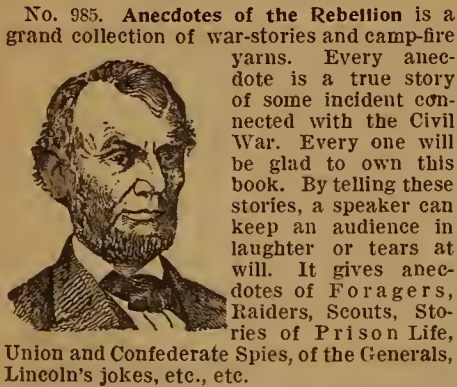
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THE refuse vegetable-tops, small potatoes, chopped grass, or any material that will serve the purpose, may be cooked together and thickened with ground oats, which will make a cheap and nourishing food for confined fowls in summer, as they do not then demand as much concentrated food as in winter. If this is not convenient, chop the materials fine, and feed to the hens.

LICE ON POULTRY

Many poultrymen claim that their fowls have no lice; but it is almost impossible to have a large flock of fowls or chicks in very warm weather without finding the lice, except with the strictest precaution. A "few" lice will multiply into several thousands in a few days. Then there are the large lice on the heads and necks. Even in winter the large lice can be found, and sometimes the mites, also. Lice in summer seem to be a portion of the complement of a poultry-plant, hence there should be diligent search at all times for the pests. The bodies of fowls provide warmth and comfort for lice, and the vermin can always find safe places until the conditions are more favorable for them.

ECONOMY OF FORAGING

The hen is a scavenger, and in hunting up the stray bits here and there she becomes a medium for converting that which would be lost without her aid into a valuable and salable product, while the number of seeds of weeds and undesirable grasses consumed lessens the labor of the farmer the succeeding season. Hence, in the fall she often repays whatever loss may have been sustained by her support in the early portion of the year. Although many hens do not lay during the fall, being engaged in shedding the old and donning the new feathers, yet at no season of the year could this be done at less expense than in the fall. The hens should, therefore, be given their liberty in the fall, to forage at will, in order to save the waste left in the fields from harvesting.

INDIGESTION

Many poultry-raisers are troubled with a disease among their fowls that they may not, perhaps, be able to determine. The fowls will at first appear rather stupid, and then they begin to droop. The face and ear-lobes turn almost white, and the droppings are of a yellowish green. When a bird is thus affected the symptoms are those of indigestion. One of the best methods of curing fowls with such ailment is to first place them in a clean coop that has the bottom nicely covered with straw. It is better to put each in a different coop. Then put a few drops of tincture of nux vomica (which may be procured at any drug-store) in one tablespoonful of warm water, and give the bird a dose morning, noon and night. Feed hard-boiled eggs, cooked meat, bread, and give fresh water to drink. Repeat this treatment for three or four days.

EGGS FOR INCUBATORS

Hens are better than pullets to provide eggs for incubators, provided the hens are not made too fat, and for the following reasons: Hens are fully matured and have completed their growth, while pullets are themselves immature birds—large chicks—and are not capable of imparting the hardiness, vigor and stamina that comes from the parent that is fully and completely matured in every respect. In experiments made with hens and pullets it was found that while the eggs of pullets hatched fully as well as those from the hens, yet a large proportion of the chicks from pullets' eggs died. Another point is, be careful of buying. When one buys his hens or pullets he may have to procure them from various sources, and in so doing he also buys disease and lice. Raise your pullets if possible, and then you will prefer them of good breeds.

SEX OF YOUNG CHICKS

After some experience chicks can be selected before they are two months old. Leghorn pullets soon show their sex on the wings. Barred Plymouth Rock cockerels are lighter than the pullets, and there is a difference in the shape. Pullets seem to fill out the wings sooner and take form early. Cockerels are straight up (their heads over their feet), have longer legs and necks, and are bare about the shoulders. The pullets have rather more of the Dorking or duck shape, not standing up so straight. Observation and experience are the best guides. It has been claimed that if the little combs are examined with a magnifying-glass, those of the cockerels will be firm and straight, while those of the pullets will have an inclination to lean over. After all, there is no sure way; but one accustomed to watching chicks can pick them out, though they cannot describe how it is done.

AMMONIA AND THE DROPPINGS

Some portions of poultry-manure are insoluble, due to the formation of silicates from the lime and gritty materials. Soap-suds in the manure will cause the formation of fat acids, which, united with the chemical substances of the manure, form "salts," they being soluble and ready for use. The droppings contain ammonia in a ready and available form; but no loss of the ammonia occurs when the manure is at once spread on the ground, as the fresh earth absorbs and retains it. Ammonia odor is an evidence that the poultry-manure has decomposed. Hard soap contains no potash, but soda is used instead. Lime, soda, potash, or any substance that causes decomposition, will permit of the formation of ammonia; but the fat acids will fix it, and as water absorbs ammonia, no loss can occur so long as the manure is damp. The manure should, however, be used as soon as it is turned out of the barrel.

LARGE EGGS.—R. P. J., Carlisle, Pa., states "that his hens lay extra large eggs, some of them having no shells." The cause is no doubt due to the hens being excessively fat.

FEEDING GRAIN.—S. F. L., Easton, Mass., asks "if it would not be an advantage to use other grains than wheat and corn in winter, and also wishes to know if rye can be included." A variety of grains, such as corn, wheat, rye, buckwheat and barley may be used with advantage, as fowls always relish a change of food.

FEEDING GESE, DUCKS, ETC., TOGETHER.—A. R. K., Mount Clemens, Mich., asks "if it will be proper to keep geese, ducks and other fowls together in the same yard, or separately; also, which breed of chickens are better for market—Plymouth Rocks or Brahmas." If the yards are small they will thrive better if each kind is separated from the others. There is probably no advantages possessed by Plymouth Rocks and Brahmas comparatively.

PROBABLY INDIGESTION.—C. C., Frohna, Mo., states "that her young turkeys have swelling of the crops, the crops being twice the ordinary size. If held head downward water with a disagreeable odor runs out. Some die, but others appear well. Turkeys under two pounds do not seem affected." The difficulty is probably indigestion, and perhaps lack of gravel or gritty material, the causes being local. The crops will always remain large, but by compelling them to forage, giving no food at all, the turkeys may grow and thrive. Such cases usually result from overfeeding.

The Grange

By MRS. MARY E. LEE

THE OBSERVATORY

The most learned arguments of the wise are often set at naught by the votes of fools.

No matter whether he is a child of six or sixty, "All work and no play makes Jack a dull boy."

The most enlightened self-interest is conducive to the highest happiness of the greatest number.

The bore who spends hours each day in idle talk can say nothing half so welcome as "good-by."

It's the men and women who give the honest thought to their work who accomplish maximum results with a minimum of labor.

He who constantly gives of his thought must as consistently acquire, else he will find those he would teach forsaking him. A drained jug attracts no flies.

Life is too short, and the world too beautiful, to give over to deadening toil and stupefying drudgery. There is a playtime in the economy of Nature, as well as a time for work.

Hon. F. A. Derthick, Master Ohio State Grange, addressed large and enthusiastic field-meetings in New Hampshire. He writes that National Lecturer Bachelder is sure to be the next governor of New Hampshire.

The planter, who is Man sent out into the field to gather food, is seldom cheered by any idea of the true dignity of his ministry. He sees his bushel and his cart, and nothing beyond, and sinks into the farmer instead of Man on the farm.—Emerson.

WHERE THE PROFIT LIES

Farmers are awakening to the fact that when a merchant sets both the buying and selling price, and is sole judge as to the goods he sells, that the profit does not go into the farmer's pocket, nor do the goods last too long. "Catch them going and coming" and "quick and frequent sales" are mottoes that have taken many dollars from farmers' families.

A trial of coöperation in buying, if goods are bought from reliable houses, will convince any one of the advantage of buying at wholesale rates. If unaccustomed to buying by mail, it is a good plan, unless you know the brand of the goods, to buy the best article of its kind that is quoted. The price may be only a trifle less than home prices, but in the vast majority of cases the goods are far superior. Many years of experience in buying through catalogue houses convinces us that from twenty-five per cent to fifty per cent can be saved, and a better quality of goods gotten, than is possible in a small country store. This, with the occasional trip to the city, will make the same amount of money before used furnish many comforts and luxuries.

WHERE CAN LABORERS BE FOUND?

One of the serious problems confronting the farmer is that of adequate labor to operate his plant successfully. It is chimerical to hope that the prejudice existing among laborers, against farm-work will magically melt away. Whether the advantages offered by public works are real or apparent, they get the workers, which is the point. Each season finds it more difficult to get skilled farm-laborers.

We need, and must have, a constant supply of laborers large enough to insure help for all who desire to employ. With the present scarcity the farm-laborer is about the "touchiest" and most independent animal in existence. It is not an unusual thing for him to trump up some sort of an excuse for unpleasantness at the busiest season of the year. The wise farmer usually lets him go, even at a loss to his crops. Colored labor has not proved successful in the North.

Interest is being manifested in the mountain whites of the South as a possible source of supply. But let the source be what it may, a much larger and more efficient supply of labor is needed, or many farmers must curtail operations, and increasing areas be converted into grazing-lands.

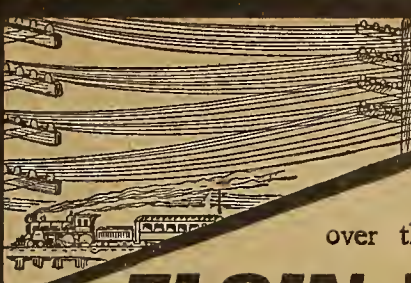
STATE GRANGE DELEGATES

Send your ablest members to represent you at the state grange. The annual convention is not a junketing expedition, to give a few people an outing, but a meeting for deliberation and counsel as to the best means for securing the largest benefits for the farmers. Moreover, the stand the grange takes on various questions not only indicates to other industries the demands of agriculture, but writes in unmistakable terms the mental status and culture of the farmers. Therefore, send to the annual meeting your keenest, wisest, most sagacious and cultured men and women. They will creditably represent you and win respect for your grange, and will also become leaders in the new life that is opening up to us. If you feel that you would like to send Mr. and Mrs. John Smith, who cannot comprehend the arguments made before the grange on many subjects, and who wait till they see how another member stands before they cast their halting votes, why pay their expenses out of your own treasury, and be content. Do not send them, no matter how lovable and excellent people they are, as delegates. You cannot afford it. There are keen, level-headed, clear-visioned men and women, who have the courage of their convictions, in every grange. Send them, not once only, but many times. It's results you are after, not momentary honor.

THE COMMONNESS OF BEAUTY

There is nothing quite so universally common as beauty. Turn where you will, grace of line and harmony of color greet the eye. Nature never overdoes. She places a proper value on proportion. She is not obtrusive. So perfect is the harmony that the senses are not offended. How man, surrounded from infancy by these gentle monitors, can have the temerity to plant a beruffled and bedizened monstrosity of stone and boards on a bare knob or a wide plain, and then cover it with gaudy and intrusive paint, passes comprehension. A day's ride in a neighborhood where new houses are going up is enough to distract a lover of beauty. But when he is called upon to admire the beauty of a hunch-backed house, he must be a base deceiver indeed who can murmur polite platitudes. For pity's sake, since we must have houses, let them at least be decently respectable, and not insult fair Nature's face with their idiotic flauntings. Let them be solid, substantial, comfortable, and conform in outline and color to the topography of the land, and you will find Nature generous and tolerant with you. Her sun and winds will temper their shafts for you. If you plant trees and shrubs and vines, then will she lovingly protect you, and daily yield new visions of beauty.

Did you ever see a genuinely, thoroughly honest and sensible man or woman come from one of these horrible piles? Weren't they just a little lopsided, and afflicted with "mental strabismus," as Holmes would term it?



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Charcoal sweetens the breath after smoking, drinking, or after eating onions and other odorous vegetables.

Charcoal effectually clears and improves the complexion, it whitens the teeth, and further acts as a natural and eminently safe cathartic.

It absorbs the injurious gases which collect in the stomach and bowels; it disinfects the mouth and throat from the poison of catarrh.

All druggists sell charcoal in one form or another, but probably the best charcoal and the most for the money is in Stuart's Absorbent Lozenges; they are composed of the finest powdered Willow charcoal, and other harmless anti-septics in tablet form, or rather in the form of large, pleasant-tasting lozenges, the charcoal being mixed with honey.

The daily use of these lozenges will soon tell in a much improved condition of the general health, better complexion, sweeter breath and purer blood; and the beauty of it is that no possible harm can result from their continued use, but on the contrary, great benefit.

A Buffalo physician, in speaking of the benefits of charcoal, says: "I advise Stuart's Absorbent Lozenges to all patients suffering from gas in stomach and bowels, and to clear the complexion and purify the breath, mouth and throat; I also believe the liver is greatly benefited by the daily use of them; they cost but twenty-five cents a box at drug-stores, and although in some sense a patent preparation, yet I believe I get more and better charcoal in Stuart's Absorbent Lozenges than in any of the ordinary charcoal tablets."

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Around the Fireside

WHAT THE CAKE-WALK REALLY IS

BY THE time of the Louisiana Purchase, the negroes, especially those of the interior, had lost all recollection of Africa, and with the failure of the mothers to teach their children even a few words of their old speech that tie disappeared. Being an imitative race, they soon learned to adopt the songs, dances and customs of their masters applicable to their conditions. For example, the "cake-walk" is but a grotesque variation of the stately minuet of long ago.—Leslie's Monthly.

THE ROMAN ALPHABET IN JAPAN

The Roman alphabet grows more in favor with the nations of the earth. The latest country to take steps toward its adoption is Japan. The government has recently appointed a commission to draw up a plan whereby Japanese writing may be able to conform to modern English and French forms. In China progress in the same direction is reported, and missionaries there say that the old and inflexible sign-writing is sure to go. Germany is rapidly falling into line, and the number of books and pamphlets printed in Roman characters increases year by year. In Russia, however, the individual alphabet peculiar to that country still shows no sign of change—the one country whose literature is almost inaccessible to the foreign-born student. But from a broad survey it seems inevitable that eventually the one alphabet—the Roman—will rule the world.—Harper's Weekly.

HINDU FOX FABLE

"Indian Fables" is the work of P. V. Ramaswami Raju, a learned Hindu lawyer and college professor in London. The book contains a hundred fables of unequal merit, collected by the author among the people and writings of India. Some of them are pointless, while others show the author's Anglo-Saxon training in the trite morals tacked to their tails. As a whole the volume will not cause the eclipse either of Mr. Aesop, yet some of these Hindu fables are good enough to live. To the student of folk-lore the collection will be especially interesting, affording new proof of the universal similarity of the animal stories of all peoples. Bre'r Fox and Bre'r Rabbit are here, with the same qualities with which Uncle Remus and the African negroes have credited them. The raw materials for Kipling's "Jungle Tales" are apparent on almost every page, though the art is lacking.

Here is one of the more original of the new fables, entitled "The Sea, the Fox and the Wolf."

"A fox that lived by the sea-shore once met a wolf that had never seen the sea. The wolf said, 'What is the sea?'"

"'It is a great piece of water by my dwelling,' said the fox. 'Is it under your control?'" said the wolf.

"'Certainly,' said the fox.

"'Will you show me the sea, then?'" said the wolf.

"'With pleasure,' said the fox. So the fox led the wolf to the sea, and said to the waves, 'Now, go back.' They went back. 'Now, come up,' and they came up. Then the fox said to the waves, 'My friend, the wolf, has come to see you, so you will come up and go back till I bid you stop,' and the wolf saw, with wonder, the waves coming up and going back.

"He said to the fox, 'May I go into the sea?'"

"'As far as you like. Don't be afraid, for at a word the sea would go or come as I bid, and as you have already seen,'"

"The wolf believed the fox, and followed the waves rather far from the shore. A great wave soon upset him, and threw up his carcass on the shore. The fox made a hearty breakfast on it, saying, 'The fool's ear was made for the knave's tongue.'"

PYGMIES

The pygmy races are reported to be widely distributed, not only in Africa, but in all parts of the oriental world, including Asia and the islands of the Pacific. The occurrence of pygmy races in Europe has been proved beyond doubt. Thus in three different places of Switzerland, as well as in various parts of France (Cave aux Fées, Mureaux, Chalons-sur-Marne), bones of pygmies belonging to the neolithic period have been found mixed together with skeleton fragments of Europeans of high stature. Recently similar discoveries were also made in Germany. Besides, even to-day living pygmies are to be found in Europe, especially in Sicily, in the province of Girgenti. As to America, in the celebrated field of death at Ancon and in the ruins of Pachacamac the graves contain the skulls and skeletons of people of large stature, as well as those of pygmies. According to D'Orbigny, the mean stature of the modern Peruvian is below sixty-three inches, a size which justifies the assumption that even to-day pygmies are living among them, as they did four hundred years ago.

Various hypotheses were advanced to account for the occurrence of pygmies in Africa. The first was that they were descended from pygmies immediately and directly created of God, independently of other creation. The second explanation was that they have been derived from some lower order of animal—the ape, for example—in Africa, where the ape life is so highly developed. The third hypothesis asserted that these pygmies were a race of degenerates, sprung from an original normal stock—the present Batu, for example, or their ancestors. The fourth idea advanced on this subject was that dwarfs were merely degenerates from the present larger races, the separation having occurred during the period of the present ascendancy of the prevalent tribe. But in view of the more and more accumulating evidence of the co-existence of dwarf races with races of large stature on the various continents, all those hypotheses

prove unsatisfactory, and the prevailing opinion among scientists is that the pygmies were the primitive races from which the larger races have been developed.

Even as in the history of the creation of animals, the smaller forms preceded the larger ones, so it was probably also in the evolution of mankind. First, there were the smaller races, and from these developed the larger ones. Thus Professor Virchow, who contributed a great deal to the establishment of the fact that pygmies were distributed in Asia and the islands of the Pacific, in a lecture on this subject expressed his belief that "originally the human beings were small, and only in the course of many generations assumed larger statures." This view is supported by the opinion of all the scientists and travelers who had occasion to come in direct contact with pygmies. They arrive at the conclusion that the pygmies in Africa are primitive races, which amounts to saying that the pygmy races constituted the starting forms of mankind.—New York Tribune.

PREPARING TO BUILD THE CANAL

More than a year must elapse before actual work can begin on the Panama Canal. Many important steps in preparation remain to be taken. In case the Panama program should be impracticable, the President, by the terms of the act of Congress, would turn to the Nicaraguan route, and this would occasion a further delay.

Secretary Hay is already taking steps to negotiate a treaty by which the Colombian government will grant to the United States a perpetual right of way across the department of Panama, with certain other concessions and privileges. The memorandum submitted by the Colombian minister before the adjournment of Congress was unsatisfactory in several particulars, and it will be necessary to persuade Colombia to deal more liberally with us than it proposed to do. Then the treaty must be ratified by a two-thirds' vote of the Senate, which, it is expected, will hold a special session in November.

The Attorney-General is working on a second preparatory step. He has sent an attorney to Paris to look into the legal rights of the Panama Canal Company, to see if it can give the United States a perfect title to its unfinished waterway. Corresponding studies will also be made here.

In case no legal difficulties arise, and the Senate ratifies the treaty, a commission of seven members will be appointed to have charge of the undertaking. They will first have to prepare specifications, showing in minute detail what the government asks of the contractors who will bid on the work. The commission will then draw the contracts and see that they are properly carried out.

The Secretary of the Treasury will also have a part to perform. He will pay forty million dollars out of the current surplus funds to the French company if its property is finally accepted, and then will arrange a bond issue to cover most of the rest of the cost of the canal. The first boat will probably pass from ocean to ocean about the year 1910.—Youth's Companion.

A BOY'S IDEA OF RIGHT

At the "Old Cummins Jackson Mills," on the West Fork River, in what is now West Virginia, was living fifty-seven years ago a healthy boy, who had very definite ideas of honor and a strong sense of right. Little Tom Jackson, like a good many other boys, was fond of fishing, and equally fond of selling his fish whenever he could find customers.

In the village of Weston, three miles above the mills, Conrad Kerster kept a small store and market. He had agreed with the boy to give him fifty cents for every pike a foot or more in length that he caught in the mill-pond.

The boy was only ten years old, but he made the contract in good faith; and, as the sequel showed, he knew how to keep it.

As time went on, a good many twelve-inch pike were delivered at the market, with mutual satisfaction to both parties in the trade. One day the boy was seen tugging through the village an enormous fish that almost dragged on the ground. It was two inches over a yard long. Colonel Talbot, a gentleman who knew the young fisherman very well, hailed him and complimented him on his success.

"A noble fish, Tom! Where are you going with it? I want to buy it."

"It's sold to Mr. Kerster," said the boy, without stopping. "That can't be. He hasn't seen it. Say, I'll give you a dollar for it."

"I tell you it's sold. 'Tisn't mine."

"What's Kerster going to give you for it?"

"Fifty cents!" shouted Tom, still keeping on his way.

The Colonel called after him, "I'll give a dollar and twenty-five cents!"

Tom turned a moment with an indignant look, and replied, "If you get any of this pike you'll have to get it of Mr. Kerster." And on he went, bending under his load, till he reached the store.

Mr. Kerster was astonished. "Fifty cents isn't enough for that fish," he said. "I shall have to give you a dollar."

"No, sir; it's yours at fifty cents," insisted Tom. "I'll not take any more. You've been kind enough to pay me for some that were pretty short." And fifty cents was the price paid for the big pike.

This story Mr. Kerster himself, in his old age, gave to his nephew, Judge McWhorter, who gave it to the Chicago "Standard."

The fine conscience and keen sense of honor that ruled the boy fixed the habit of his lifetime. The name by which he became known to the world was "Stonewall" Jackson.—Presbyterian.

The Housewife

THE BURDEN

I writhed beneath my burden, fumed and groaned.
My burden, that had felt and heard me, moaned,
"You do not know what misery is, nor what
The bitterest part is, of our common lot.
The strength I load in you with my loath weight
My weakness would so gladly own its fate.
Think, once, how much more dreadful it must be
To be the burden, than bear, and pity me."
—W. D. Howells.

THE EDUCATION OF "YOUNG AMERICA"

BEFORE the time of the Reformation "a thorough education" signified a well-developed memory; learning was then but little more than memorizing a text or a formula verbatim. The pupil was mainly the passive recipient of the facts, which were poured into his mind by the teacher. He never presumed to question these facts or dogmas, believing that everything the "master" said must be true.

The education of "Young America" differs materially from that of the Old School. His education is founded much more on the idea contained in the original of the word "educate." This word is derived from the Latin "educere"—to lead out. It is the leading out of the natural powers of the student that renders education so valuable and necessary at the present time. In a broad sense, a thorough education means the development and cultivation of the physical, mental and moral powers of man; in a narrower sense, the development and training of the mental faculties. Modern education appeals to free inquiry, and involves the exercise of the learner's own powers of thought and discovery.

A young man may go through school, and forget many of the facts that he has acquired, but if he has learned to "think" he may be a success in whatever calling he chooses.

Many a boy who will never have the opportunity of attending a college, or even a high school, may become comparatively well educated if he learns to make use of his odd moments. Those who make steady gains march steadily ahead. The gain may not be rapid, but it can be steady.

Any boy in this broad, free America who really desires to learn can have the opportunity. But he must learn that there are many moments in the weeks that hasten so rapidly which may be used to advantage.

Let him choose any subject, and give close application to it, if for only a few moments at a time, and he will be surprised at the end of the year to find how much he has learned. These few moments rightfully used will work wonders in any line at the end of six months or a year.

Many a man with limited time and opportunities has a better-developed mind than one with more time and broader opportunities for culture, because he applies himself more conscientiously to whatever he undertakes.

Too many of us are like Bunyan's man with the rake, who would not lift his eyes from the ground, and who was forever drawing up sticks and straw and rubbish with his poor rake. We need education to enable us to lift our eyes to higher planes.

Young men need to have their minds developed, that they may have well-rounded characters, and visions broad enough to look on all sides of a measure.

This wonderful century will demand much of our "Young America."

ELLA BARTLETT SIMMONS.

HOW TO MAKE FRUIT COBBLERS

The best cobblers are made without a bottom crust, and are cooked on top of the stove.

PEACH COBBLER.—Into a two-quart granite pan put one and one half pints of peeled and pitted peaches; cover with water, and add one half cupful of sugar. Make a crust of one cupful of fresh buttermilk, one half cupful of butter and one half teaspoonful of soda, with a pinch of salt. Mix as for biscuits, and roll out the size of the pan. Place the crust over the peaches, and with a knife slash the crust in two or three places, to permit the escape of steam. Cover the pan containing the cobbler with another pan, bottom side up, and set on the back of the stove; keep turning the pan, so that the fruit will not settle and burn. Let it steam one hour, or longer if necessary. Serve with sugar and cream.

BATTER COBBLER.—Place apples or peaches in a granite pan. Make a batter of one egg, one half cupful of butter, one half cupful of buttermilk, one half teaspoonful of soda, a pinch of salt and flour enough to make a stiff batter. Pour this over the fruit, put a smaller pan, bottom side up, over the cobbler, and set on the back of the stove, and let it steam until it can be tested with a broom-straw the same as cake.

MRS. W. L. TABOR.

EGG DAINTIES

EGG PATTIES.—Beat three eggs well, then add a pinch of salt and enough coarse bread-crumbs to make a soft, doughy mass. Form into small, flat cakes, and fry in butter until a golden brown. Serve with grated cheese, cream gravy or maple syrup.

STUFFED EGG BONBONS.—A delicious confection for teas or luncheons can be made from the very large candy eggs sold in all candy-shops. Choose those eggs which match the color scheme of the table. With a very sharp knife cut off the large ends, and remove most of the marshmallow preparation inside. Stone some fresh dates, and chop very fine with half their quantity of English-walnut meats; beat the white of one egg, and add enough powdered sugar to form a thin icing. Mix the icing with the chopped dates and nuts into a firm dough, and fill the cavity in the eggs with this mixture. Now moisten the tops of the eggs with some of the icing, and stick the two parts firmly together.

PINK EGG SALAD.—Boil four eggs from twenty to thirty minutes, then plunge into cold water, to prevent the yolks from turning green. Remove the shells, and pour over the eggs the liquor from pickled beets. Be sure that all are well covered. Let stand over night, and when removed the eggs will be tinted a pretty rose-pink. Slice the eggs, and lay in the bottom of a mold. Now boil a small chicken until the broth measures one pint. Remove the meat, strain the broth, adding a tablespoonful of gelatin dissolved in water, and pour into the mold. When the broth has become a cool, very firm jelly, turn it out of the mold. The rosy rings of the eggs, with their yellow centers, lying in the clear, firm meat-jelly are very effective. Garnish with parsley, and serve in slices with mayonnaise dressing.

ALICE B. CHURCHILL.

CROCHETED LACE

Use No. 40 thread and a fine steel needle, or if wanted for trimming upon flannel use crochet-silk. The pattern is so very plain it does not need a detailed description.

BATTENBERG CENTER

This beautiful pattern is both easy of accomplishment and quite showy when finished. The center can be of linen or



scrim. If of the latter it would look well lined with a color to match the flowers used as a table-decoration.

GINGER PUMPKIN

Peel, and slice seven pounds of pumpkin, place in a preserving-kettle with five pounds of sugar, and let it stand over night. In the morning drain off the juice, and add to it four lemons sliced and two ounces of ginger-root. Boil until the syrup is thick, then drop in the pumpkin, and boil until cooked through.

MRS. W. L. TABOR

Skin Diseases

If you suffer from Eczema, Salt Rheum, Ringworm, Itch, Ivy Poison, Acne, or other skin troubles,

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of clothes, dishes, milk-rooms, milk-pans, -pails, -bottles, butter-jars, dairies, everything.

Banner Lye does it and does it quickly and the way it should be done. It makes cleanliness a new word. There is more "dirt" than you can see in a dairy; and that dirt often wastes your material by injuring its keeping qualities. Banner Lye is also the quickest and most thorough disinfectant. Costs only a few cents; but is preferable to the more costly articles sold for that purpose. It is odorless and colorless.

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In soft rough finish

Colors: Black, Brown, Maple, Steel, Pearl

MEN'S HAT No. 2
In smooth finish

Colors: Gray Mix, Brown Mix, Black Mix.

BOYS' HAT No. 3
In soft rough finish

Colors: Black, Brown, Maple, Steel, Pearl.

BOYS' HAT No. 4
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In ordering, give head size, and color and number desired.

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THE monotony of household duties falling to the lot of woman, especially those remote from the centers of activity, where the daily marketing and burdensome shopping of the village woman would come as a happy relief, is very great indeed. It has been said that the "sameness," and not the drudgery, of American farm life is responsible for a large per cent of the lost nerve-force from which so many farmers' wives suffer.

Be this as it may in the home land, certain it is that the Ainu women of the northern islands of Japan do not suffer for lack of variety of occupation. Indeed, it may be said that they are in the full enjoyment of "woman's rights." They have the right to do all the work, and as a pleasant pastime vie with each other in "dressing up" their husbands, each striving for the most becoming results.

Great deference is paid to the men, who are far from superior to the women. If a woman meets a man upon the highway, she at once turns aside, covering her mouth with her hand, that the air may not be polluted by a woman's breath. The cloth head-gear is instantly removed, and, bowed in the attitude of humility, she stands until the man has fully passed her.

There is a strange fascination about these women, so free from guile, so warm-hearted and honest. They are not beautiful, for their frank faces are marked by an ancient custom which is most disfiguring. They are about five feet two inches tall, and a partly compensating feature of their burdensome lot is the fact that they are blessed with great physical endurance, sickness in any form being very rare among them.

When an Ainu woman marries, and chooses the lot of a farmer's wife, she knows full well what to expect. Of course, her husband will cheerfully aid her in all things with free advice and full directions, but as to the real toil he as freely passes it over to her, and she becomes the "motive power" in all affairs. He does not honor her by bestowing his name upon her, but she is known by her maiden name or the wife of so-and-so. When widowed she takes the name of her child if she has one, which is usually the case, for it is considered a great disgrace for a married couple not to have a family, a fact which forms sufficient grounds for a man to divorce his wife. In such a case it is supposed that the gods are punishing the woman for some of her evil deeds, and without trial, judge or jury she is declared divorced, there being no higher court than the will of her husband.

When the crops have been planted, between that season and harvesting-time the wife is occupied in a variety of ways. Like all native races, they have learned to utilize every provision made by the bountiful hand of Mother Nature. If there is a lack in one direction it is usually made doubly good in another. Having no machinery, they depend entirely upon their hands. Their fingers become well skilled, and the result is wonderful. Their dresses are somewhat after the kimono pattern worn by the Japanese, the cloth for the farmer and his family being woven by the patient "farm wife." The thread is made from the fiber of the inside bark of the elm-tree, and is ingeniously twisted into very fine strands, which are used both for weaving and sewing.

The "dress-up" garment of the men is fearfully and wonderfully made, and although quite grotesque when taken apart from the wearer, it well becomes his unique style. The cloth is coarse and heavy, colored with peculiar dyes made from the roots of native plants and from raw indigo, as well as from the barks of a variety of trees. These are prepared in every farm home, usually after the wife has gathered the bark or dug the roots.

The background of the garment is usually a dark, dirty-looking blue. Upon this patterns of all sorts of things, seen and unseen, known and unknown, are neatly sewed. These are of contrasting colors or white, and stand out in bold relief, rendering the wearer visible as far as the range of the naked eye extends. When a farmer has received the finishing-touch from the hands of his wife, and stands fully arrayed for a bear feast, he is truly something upon which to look. In addition to preparing the showy dress the patient, long-suffering woman spends some days whittling shavings and arranging them into a becoming crown, with which to deck his noble brow during his outing. Grotesque as this may seem, there is something very fascinating about these strange people and their primitive ways.

The men wear ear-rings, as also do the women. These are large, heavy hoops, beaten of metal of some common and cheap kind. These ornaments, whether iron hoops or wee, sparkling gems, are barbaric in the extreme. I would as soon think of piercing my nose and go about with a hoop dangling in true pagan

The Ainu Women

By JESSIE ACKERMANN

style as to disfigure one of the most delicate features of the human body by trying to improve its beauty with the glitter of ever so valuable a gem. There are features of nature that cannot be improved. These hoops, however, are not so strangely out of keeping with this unusual make-up.

Before the farmer can find himself fittingly arrayed there is much toil to be done by his wife. She must make herself useful by going forth into the woods, frequently miles away, to gather the bark of the young elm-tree. Sometimes her husband accompanies her, but not unless he can find an old horse of some kind to carry him. Horses are few in number and of a sort of razor-back breed. I found walking far more desirable. They have a peculiar fashion of lying down at most unexpected times and in most inconvenient places, regardless of the wishes of the rider. It is not an uncommon sight to see a farmer mounted, his wife racing hard and fast, ankle-deep in mud, to keep up.

Then, the chestnuts must be gathered, for these figure largely in the winter's supply, and who can do it so well as the wife? Home she trudges, day after day, until the woods far and near have been scoured for the shining nuts. Roots must be dug, for the only flour for winter's use is that made by pounding the roots of the dog-tooth plant.

The hard boards upon which they sleep must be covered with matting, and in addition to this each member of the family must have a mat to do service as a blanket. The bark that is not used for thread is dried, seasoned, and stripped into shape for weaving. Some of this matting is highly artistic in pattern, and is a wonderful result of such primitive methods.

These farm women enjoy the distinction of being well skilled in an art unknown to the women of any other part of the world. The origin of this art is as ancient as the foot-binding of China, and its original purpose is as completely lost in the dim past. These people give no other reason for the continuance of a barbaric custom than that their ancestors did so.

When a girl child is born into the farmer's family it is allowed to remain as nature intended it until the little tot is about two years old, when the ancient practice of disfiguration begins; for she cannot hope to win a husband until a full-fledged mustache is tattooed upon her upper lip. The work is begun upon the lips of the child, and, being very painful, is done a little at a time, two years passing before the operation is completed. When finished a large diamond-shaped blotch of dark blue surrounds the mouth and extends in points toward the ears.

The preparation used in the process is a concoction made by the wife. Ash-bark is soaked for some days, and when ready for use a small fire of birch-bark is kindled under an iron pot. This is done in order to produce soot, a goodly portion of which is rubbed

When the men have eaten, satisfying themselves to the utmost, the women gather up the scraps and the men grudgingly turn out a small quantity of wine in payment for their toil. Each woman, quite contented with her lot, returns to the farm-house ready to take up the burdens of life without a groan. General happiness characterizes their home life, and on the whole they are a happy race.

A HISTORY OF EGYPT

All interested in Egypt's ancient history, whether specialists or amateurs, will welcome the first volume of Doctor Budge's work, which contains an account of the neolithic and archaic periods of the land of the Nile. Summarizing, as this book does, the latest result of Egyptology, and admirably systematized, we have at last a substitute for the works of Rawlinson and a valuable check to the "History of Egypt" by Flinders Petrie. The special interest attaching to Budge's book is the full discussion, which occupies half the volume, of the neolithic period, which reaches back to an unknown antiquity.

In this predynastic age a race inhabited the Nile Valley which was entirely different from the Egyptians who later possessed them. The primitive people belonged apparently to the non-negroid family of northern Africa, and in physique were dolichocephalic, with oval features and lips which protruded but little, of somewhat slight build, and in some cases blue-eyed. Clothed at times in skins, or later in linen, they seem to have dwelt in reed huts, hunting and fishing, but not, so far as we know, engaging in agriculture or pasturage. They had reed boats, which were of considerable size, while their pottery had reached a high degree of excellence. In the making of flint tools and weapons the predynastic race was expert. The most striking deviation between the primitive people and the "new race" of conquerors was in their mode of burial. While the Egyptians embalmed their dead in a recumbent attitude, the predynastic people approximated to a curious degree the custom observed by the ancient Peruvians. They buried the corpse with the knees bent up against the body and the hands placed before the face. In many cases the head and other parts were severed, or the flesh was removed from the corpse. The body lay, as a rule, on the left side, facing the west, with the head toward the south, or sometimes was placed on its back and covered with an earthenware pot. While the custom of breaking the articles buried with the corpse prevailed extensively in many parts of the world, the predynastic Egyptians alone seem to have destroyed the tombs by fire. Cannibalism, which is always religious in origin, prevailed to some extent, but mummification was unknown. The latest date which Budge will allow to the predynastic antiquities is 5000 B.C.

The Egyptians proper, or the new race, entered the country, according to Budge, by crossing the Straits of Bab-al-Mandab from southern Arabia. They were probably of Semitic origin, akin to the Babylonians, who made so profound an impression throughout the Mesopotamian region. We thus have an explanation

of the fact that much of the vocabulary of Egyptian is distinctly African in character, while many grammatical features resemble the Semitic languages. Budge, however, holds that the basis of the language is non-Semitic. Archaeological evidence is also produced to show that the new race entered Egypt from the south, so that the author has at least made a strong plea for his thesis.

The second chapter of the book is devoted to Egyptian chronology, where Budge adheres in the main to the conclusions of Brugsch, and gives a valuable summary of the native data for the lists of kings, such as the Turin papyrus and the tables of Abydos and Karnak. The dynastic catalogues, according to Manetho,

as they are preserved in Greek and Latin writers, are also of value. It is refreshing to find Budge attaching comparatively little weight to the purely classical accounts of Herodotus and Diodorus. Budge, like Brugsch, dates Menes, the first historic King of Egypt, about 4400 B.C. With regard to the first of the thirty Egyptian dynasties, it is interesting to learn that only within the last eight years has anything been known with certainty about it.

The volume under discussion carries the history through the first three dynasties. Of these kings, who number twenty-four, but little besides the names, and a few allusions, like the connection of Semti, or Hesepti (fifth king of the first dynasty), with the famous "Book of the Dead," and his dancing before Osiris (compare the Hebrew story of David dancing before Yahweh, II. Samuel vi. 14), or the building of the pyramid of Saggara by Tchaser (second king of the third dynasty), is known.—New York Times.



AINU WOMEN AND THEIR BOAT

upon the surface to be operated upon. The part to be tattooed is then washed with the preparation, which sets the color, as it penetrates the scratches made by a sharp instrument. The work is continued from time to time, as the irritation caused by the scratching passes away. As the child grows the blotch increases until it becomes the disfiguring feature of the face.

In olden times it was the custom to continue the work of decoration after marriage by tattooing a band across the forehead, rings on the fingers, and many circles about the wrists and arms. This, however, has largely passed away.

The farmer's wife is a great factor in social life. After she has arrayed her rural lord in "purple and fine linen," that he may appear his best at any special function, she sends him, if possible on horseback, to his outing, then turns her attention to herself, finally reaching her destination on foot, but in good time to serve at the feast.

ROWING TO CHURCH

THE Finns are a good people. They are also good Lutherans, and for their faith and mother-tongue hundreds are escaping to our land from the tyranny of Russia.

Much of Finland is island and peninsula, and most of the churches are so placed that they can only be reached by boats. The "church-boats" will sometimes hold as many as one hundred persons, some twenty of whom row at a time.

It is the custom for every one to take a turn at rowing, and as the church is often far away, it is no unusual thing for the church-boat to start on Saturday night, when the Sabbath is really supposed to begin. It is an interesting sight to see the peasants arriving at the waterside Saturday evening, when they start to their devotions, with their little bundles of best clothes.

They are all very friendly, and as they row to the church they generally sing, for there is no occasion on which a number of Finns meet together that they do not burst into song. Arrived at the church, they put up for the night at the homesteads round about, for the church is often some distance from the village. If balmy summer, they lie down beneath the trees, and rest under the stars.

When morning comes the women don their black frocks, the black or white head-scarfs, take their Bibles, neatly folded up in white handkerchiefs, from their pockets, and generally prepare themselves for the great event of the week. When the church service, which lasts some hours, is over they turn up their skirts, or, more often than not, take off their best things, and, putting them back into the little bundles, prepare to row home again.—Lutheran World.

NOT DOING ANYTHING

Twenty years ago a discouraged young doctor in one of our large cities was visited by his father, who came up from a rural district to look after his boy.

"Well, son," he said, "how are you getting along?"

"I'm not getting along at all," was the answer. "I'm not doing a thing."

The old man's countenance fell, but he spoke of courage and patience and perseverance. Later in the day he went with his son to the "Free Dispensary," where the young man had an unsalaried position.

The father sat by, a silent but intensely interested spectator, while twenty-five poor unfortunates received help. The doctor forgot his visitor while he bent his skilled energies to his task; but hardly had the door closed on the last patient when the old man burst forth. "I thought you told me you were not doing anything!" he thundered. "Not doing anything! Why, if I had helped twenty-five people in a month as much as you have in one morning I would thank God that my life counted for something."

"There isn't any money in it, though," exclaimed the son, somewhat abashed.

"Money!" the old man shouted, still scornfully. "What is money in com-

Sunday Reading

"TALKED ABOUT"

The neighbors talked about her nearly everywhere they met;
They talked about her till she died; they talk about her yet.
The high and low all spoke of her, as did the old and young,
And every gossip tossed her name upon her nimble tongue.

She always kept a-doing things, by night as well as day,
To set the tongues a-going in the swiftest sort of way;
Across the back-yard fences and from door to door,
At church and sociable her name was whispered o'er and o'er.

'Twas she who kissed the baby first and blest its happy birth;
'Twas she who helped to guide its feet through all the paths of earth;
'Twas she who watched beside the bed whereon the dying lay,
'Twas she who soothed the stricken friends when one was called away.

The neighbors talked about her nearly everywhere they met;
They talked about her till she died; they talk about her yet.
They talked about her wondrous hands, her heart so full of love,
And now the angels talk of her who dwells with them above.

—Nixon Waterman, in L. A. W. Bulletin.

parison with being of use to your fellow-man? Never mind the money; you go right along at this work every day. I'll go back to the farm, and gladly earn enough to support you as long as I live."

"That speech," I said to a friend of mine, one who had spent many years as a conspicuously successful teacher, "went into the bones of the young man's life, and strengthened him for a life of unselfish usefulness."

"Ah!" said the professor, "that one speech was worth years of text-book teaching! And yet it was made without an instant's preparation."

"Far from it," I answered, quickly. "It had taken sixty years of noble living, struggling against sin and self, pressing forward in the paths of righteousness, bearing the cross, following hard after the Perfect Man, to prepare that old Christian to make this speech. Then the moment came, and he was ready to teach the glorious lesson."—Our Young Folks.

A RICH MAN BROUGHT TO TERMS

Robert Carrick, one of the richest bankers of Scotland a few generations ago, was as mean as he was wealthy. Being one day visited by a deputation collecting subscriptions toward a new hospital, he signed for two guineas; and

as one of the gentlemen expressed disappointment at the smallness of the sum, he said, "Really, I cannot afford more."

The deputation next visited Wilson, one of the largest manufacturers in the city, who, on seeing the list, cried, "What! Carrick gave only two guineas?"

When informed of what the banker had said, Wilson remarked, "Wait; I'll give him a lesson."

Taking his check-book, he filled in a check for ten thousand pounds, the full amount of his deposit at Carrick's bank, and sent it for immediate payment.

Five minutes later the banker appeared breathless, and asked, "What is the matter, Wilson?"

"Nothing the matter with me," replied Wilson; "but these gentlemen informed me that you couldn't afford more than two guineas for the hospital. 'Hello,' thinks I, 'if that is the case there must be something wrong, and I'll get my money out as soon as possible.'"

Carrick took the subscription-list, erased the two guineas, and substituted fifty, upon which Wilson immediately tore up his check.

The hospital was built, and here the best part of the story begins, for the rich man who was thus forced against his will to raise the amount of his subscription soon began to take an interest in the hospital. Before many years he contributed sufficient to endow and maintain it fully.—Michigan Christian Advocate.

'Tis not the many oaths that make the truth,
But the plain single vow that is vow'd true.

—Shakespeare.

The Family Physician

By ROBERT B. HOUSE, M.D.

RECENTLY a patient in a London hospital, to whom applications of pure oxygen gas were made for treatment of a skin-disease, developed a luxuriant growth of hair upon the skin exposed to the gas, and it is said that similar treatments are being given in London, with good success, for the cure of baldness.

Thousands of well-meaning men deprive themselves of needed nourishing, force-giving food by trying to economize. They stand at a lunch-counter, and hastily swallow a sandwich and a glass of milk, to economize time and money, when they owe it to themselves, and to their highest well-being, to go to a good restaurant or hotel, take time enough to eat a nutritious, properly cooked and properly served meal, and give the stomach time to begin the process of assimilation before resuming work.—Success.

ELECTRIC HEMOSTAT

Successful demonstrations are reported to have been given in London by Lawson Tait with his electric hemostat, an instrument which, as the name denotes, is intended for the arrest of bleeding in surgical operations. A platinum wire, arranged to carry a current, is inclosed in the blades of a pair of steel forceps, or any other requisite utensil, the wire being insulated with a bed of burnt pipe-clay. In practice, a current of suitable voltage is turned on, the artery seized and compressed, and in a few seconds the tissues and arterial walls are so agglutinated that the passage of blood is impossible. The temperature employed is about one hundred and eighty degrees Fahrenheit, showing a great difference between this and the electrical cauterizing instruments, and the necessity for a ligature is removed.

CHEERFULNESS A HEALTH FACTOR

"A man's house," says Beecher, "should be on the hilltop of cheerfulness and serenity, so high that no shadows rest upon it, and where the morning comes so early, and the evening tarries so late, that the day has twice as many golden hours as those of other men. He is to be pitied whose house is in some valley of grief between the hills, with the longest nights and the shortest days."

It is not an easy matter to build this mental mansion on "the hilltop of cheerfulness and serenity," but how much more comfortable it is to live in than the house in the "valley of grief between the hills!" It is not easy to be bright and cheerful when our best-laid plans "gang agley;" when balance-sheets will not balance; when the type-writer or sewing-machine will not move swiftly and rapidly, in spite of the fact that the machinery is apparently in good order; when it rains steadily and persistently on the very day when you wished for the sun to appear the brightest; when you must wear for another season the shabby gown or jacket which you had hoped to replace with a new one. It is hard to give a sunny smile to the world when, for you, "the times are out of joint." Make the effort, though, and see how you will be repaid, and what a golden reflection that little smile will throw back on your world within.

"No man e'er gained a happy life by chance,
Or yawned it into being with a wish."

—The Dietetic and Hygienic Gazette.

The Family Lawyer

By JUDGE WM. M. ROCKEL

Legal inquiries of general interest from our regular subscribers will be answered in this department free of charge. Querists desiring an immediate answer by mail should remit one dollar, addressed "Law Department," this office.

LINE FENCES.—W. B. P., Arkansas, and B. B. H., Pennsylvania. Consult local statutes as to law relating to line fences.

BUILDING HOUSE ON ANOTHER'S LAND.—M. N., Wisconsin, inquires: "Can a woman who has built a house on her husband's land, and wishes to leave on account of ill treatment, sell the same?" No; she must have the court adjust her legal rights.

POWER TO MAKE WILL.—S. M. L., Oklahoma, wants to know: "If she, a married woman with children, should enter a claim without being divorced from her husband, whether she could will the property to her children free from her husband's claims without getting a divorce?" I should think not.

POWER OF ATTORNEY.—M. M., Pennsylvania, says: "My son went to Iowa, and left money due him from his father's estate in the care of his guardian. He is now of age, and wants to know whether he can authorize any one to lift that money, and if so, how can it be done?" By executing a power of attorney, authorizing some one to collect the money for him and receipt for the same.

INHERITANCE.—E. M. writes: "If a man dies in Wisconsin, leaves a widow, but no children, what share of the property does she get? Is it her own? Could she claim any if a will was made?" If there be no will and no children, the widow receives all the property. If there be a will, she gets a dower interest in the real estate, and certain personal property not exceeding four hundred and fifty dollars set apart to her, and also a child's share in the personal property; or she might claim whatever the will gives her.

WIDOW'S RIGHT UNDER WILL.—J. V. N., Nebraska, asks: "If a man dies in Nebraska, leaving a widow and children by his second marriage, and children by his first marriage, there being a will made, one third of the property going to the widow, the remainder share and share alike to the children, can the widow break the will if her share does not amount to as much as the homestead right would allow her?" The widow has a right to take either under the will or as the law provides; and if her share does not amount to as much as the law provides, then it would be to her interest to decline to take under the will.

INHERITANCE.—W. B., Illinois, asks: "What is the law of Illinois, where a man dies, leaving no will, and there are no children. What is the wife's share, or can she claim all the personal and real estate where they have earned it together? Also if the wife, owning real estate, dies without will, and there are no children, how much can the husband claim? Also what is wife's and husband's share in either case if there are children?" If there are no children and no will, the widow would get all the property, and a widower would stand upon an equal footing. If there are children, then the surviving husband or wife has a dower—that is, a life estate in one third of the real estate, and takes absolutely one third of all the personal estate.

AFTER journeying many days over the stony mountains, bordered by foothills swarming with chattering monkeys, and across lonely veldts where the foot of civilized man had never trod, the little company of sturdy homeseekers had found a spot to their liking.

To the eastward, beyond the broad belt of forest which skirted their base, rose the great blue bulk of the unknown mountains. From somewhere on their wooded sides or in the hither forest wandered a little stream of pure, clear water which was to supply them and their weary cattle with drink. To the westward lay the broad veldt, covered with waving, succulent grasses, that would furnish their herds an abundance of food the year round. To be sure, in that direction, too, flowed the sluggish Batang-Lupar, with its treacherous quicksands and its herds of hideous crocodiles; but then they were safely over it with their cattle and wagons, and they intended never to return, so its perils once passed had no terrors for them. No; this spot in this strange land of Borneo, beneath the tropical sun, unfamiliar, and so unlike the Fatherland, was to be their future home, and they were to see its blessings, and shut their eyes on its evils.

So here, beneath the protecting foliage of a clump of mahoe-trees, they pitched their laager and began their work. After a few days' rest and preparation the faithful oxen were hitched to the plow and the work of turning the virgin soil began. Ere many weeks had passed the fertile loam responded generously to their efforts, and the broad acres surrounding their little settlement were teeming with golden grain. Beyond the fields under cultivation their cattle roamed under the surveillance of a zealous guardian, browsing and growing fat on the nutritious grasses. Truly it was a scene to gladden the heart of a husbandman, and none of its beauties were lost upon young Paul Adrian as he stood one Saturday afternoon upon a little hill overlooking the kraal, and feasted his eyes upon the glorious sight. Paul was the son of old Jan Adrian, who had led the trekkers half across the island, and who was esteemed the wisest as well as the richest man in the community. Full one fourth the grain waving yellow in the fields yonder was his, and of the herds browsing quietly in the distance one in every five owned him for a master.

"Surely this is plenty; this is what it is to enjoy the blessings of Providence," Paul mused. Then a smile slowly spread across his broad, handsome countenance, and he added half aloud, "I have waited long enough. This night, before I sleep, will I ask Nina to be my wife. If she accepts, then my happiness is complete." With this he turned, and was descending the hill toward the kraal when something on the distant plain caught his eye. The cattle had by this time neared the fringe of timber, which followed the stream for some distance after it emerged from the depths of the forest, and it was their movements that attracted his attention. With heads erect and tails extended they rushed away from the timbered strip as though old Nick himself were pursuing them. Now they wheeled in a body and stared with the dumb inquisitiveness of brutes in the direction of the forest. Then with low bellowings of terror barely audible in the distance, they wheeled again and continued their flight. Looking toward the spot whence the cattle had fled Paul caught a fleeting glimpse of a large, dark object just entering the wood.

So quickly was it hidden by the dense foliage of the trees, however, that it seemed more like the passing shadow of some huge bird than a material thing. But shadow or living creature, there was something about it that made him shudder, and a vague, indefinable feeling of uneasiness and a fear of coming evil took possession of his mind. With an effort and a muttered word of contempt for his own weakness he turned his thoughts into brighter channels and hurried on to the house of Hans Van Houten, there to spend the evening hours in sweet communion with the blue-eyed, rosy-cheeked, bewitching Nina.

That night the quiet, prosperous repose that the little colony had come to look upon as its own was rudely broken. When Al Snider, flock-master for the day, failed to bring the cattle in at sunset, a grave fear fell like a pall upon the settlement. A searching-party was organized, and with many misgivings they went on their errand. Guided by a sort of instinct, Paul went straight to the spot where the shadow had entered the forest. There was nothing there. A little farther down the stream, toward the open plain, the reeds that grew along the bank were broken as if by a struggle. With a beating heart Paul hurried thither. There was blood here and there on the tangled grass and broken rattans. An exclamation from one of his companions caused him to start, and his eyes followed the outstretched hand of the other. Out on the open, a dozen yards or more from where he stood, lay the body of poor Snider all in a heap, the skull crushed and the face a mass of clotted blood. Careful examination of the grounds revealed the fact that the man had been slain where the blood was first found, and no trace of a passage led from thence to where the body lay. It had been hurled through the air a distance of forty feet! What was the more remarkable was the nature of the wound. Instead of being indented, as would have resulted from the infliction of a blow, the skull had the appearance of being crushed in from all sides, as one would grasp an egg in the hand and crush its shell. Indeed, some present even went so far as to assert that they could discern the marks of gigantic fingers on the jaws and lower part of the face. Many and various were the surmises as to poor

The Forest Terror

By FRANK T. MANN

Al's untimely death, as the sorrowful procession moved slowly homeward in the deepening twilight and for many days afterward, but they all ended in mystery. That it had been the work of no human hands, however, all were agreed. But few of the native Dyaks had been seen in the neighborhood, and they, though well developed physically, were certainly not of a size and strength to warrant the belief that a single individual could crush a man's skull in his hands and then hurl his body through the air like a plaything!

From this time, though the affairs of the colony went on in the usual quiet way, a spirit of anxiety and uneasiness pervaded the life of the settlement. The sturdy Dutch farmers would have disdained to express their feelings in words; but they went about their work with a silent fear at their hearts, and many and fearful were the glances cast from beneath the broad brims of their working-hats toward the unknown forests whence their terrible visitant had come. There was something in the mystery of Al Snider's death that appalled them. Had it been a tangible danger by which they were confronted, however grave, they would have met it bravely; but this mystery—soon to be deepened by subsequent events—was of a kind to set at naught the courage of the stoutest heart.

One evening about a month after Al Snider's death the inhabitants of the laager were sitting in front of their dwellings, talking one with another, as was their custom when the day's work was done. Naturally enough, as the twilight deepened and the shadows of night settled down over the veldt, the conversation turned to the tragedy whose horrible details were yet fresh in every man's mind; and ere long almost the whole population of the kraal was assembled in a group, listening while the fearsome scene was recounted graphically for the twentieth time.

"I tell ye, it was no human hand that made those marks on poor Al's jaw; neither was it the work of forest beasts," said Jacob Strouss, the village seer, as he rose from his seat. "The slayer of Al Snider was not of flesh and blood, and my heart misgives me we shall feel its hand again."

Scarcely were the words uttered when the stillness of the night was rudely broken. From out the grove of mahoe-trees that skirted the kraal on the side next the forest came a strange, unnatural cry. It was as of a man under extreme torture shouting defiance at his enemies, only the voice was stronger by a hundred-fold than ever came from human lips, and it ended in a kind of booming, brutish wail with nothing human in it.

For fully a minute, while the dread sound rang in their ears and its cadences floated away over the low-lying veldt, the listeners never moved. They were for the moment dumb and helpless, and it seemed that their very hearts stood still. Paul Adrian was the first to speak.

"Are we all here?" he asked; and in spite of himself his voice trembled as his eyes ran hastily over the group.

"All? Yes—no; my husband! Oh, my God!" and Jan Ibsen's young wife uttered a shriek of anguish as she missed her man from the company, and remembered that he had gone to the grove for a rattan to gratify one of little Aaron's whims.

With that cry ringing in their ears, and the darkness of a cloudy night enveloping them, the villagers dared not look for the missing man outside the kraal; but when morning came search was instituted, and to their horror and consternation his body was found just beyond the grove, the skull crushed as Al Snider's had been, and the direful finger-marks even more distinct upon the neck.

For days the farmers, armed and mounted on fleet horses, kept up a systematic search through forest and over veldt for the thing which they had come to call "The Forest Terror," but to no avail. Not a trace was found of the mysterious murderer, and after a time Jacob Strouss' theory that the murders were the work of supernatural hands came to be accepted by most of the simple-minded villagers, and the search was abandoned.

A year had passed, and the fields were again yellow with waving grain. Paul Adrian stood once more on the crest of the hill that overlooked the village, and surveyed the fruitful fields and the herds of browsing kine. There was a look of settled anxiety upon his countenance, but to-day this was intermingled with an expression of pleasure. At intervals a smile would flit across his face and a tender light leap into the strong gray eyes. It was the light of love—a love that was soon to be rendered complete by the possession of its object. Nina Van Houten had promised to be his wife, and the next day, Sabbath, was to be their wedding-day.

The year had been one of great prosperity for the little colony, and had it not been for the blighting curse of the Forest Terror, who had recently left his bloody sign upon the body of a third victim, the young farmer saw no cloud in the sky of his happiness. As it was, even the horror of this scourge vanished for the time before the magic charms of love, and Paul descended to the laager, his mind filled with visions of future bliss.

As he slept that night Paul Adrian dreamed a horrid dream. He thought that he stood on the hill above the village where he had stood the previous afternoon, as also on a day twelve months before, and viewed the same prosperous scene he had then looked upon.

While Nature wore her bonniest garb, and the different phases of the landscape vied with each other in their appeals to his sense of the beautiful, a feeling of apprehension and fear crept over his soul and obscured it all. Turn which way he would, his fascinated eyes always reverted to one point—the spot where he had seen the shadow disappear in the forest, and where the body of Al Snider was found. As he looked he saw a huge, dark shape emerge from the woods and make its way across the plain toward the village. It was neither man nor beast, but a grotesque anomaly, so frightful in its make-up as to defy the powers of language to describe. It walked, or rather ran, with an awkward, shambling gait, but with incredible swiftness, and almost before his eyes could take in the enormities of the creature's form it had disappeared in the grove surrounding the kraal. In an instant almost it reappeared, bearing something in its arms. One look revealed the truth. That something was the fainting form of his betrothed.

With a yell Paul awoke, to find the sun streaming in at his bedroom window. Almost at the same moment the door was pushed rudely open, and the face of Hans Van Houten, pallid with anguish and affright, was thrust in. "Paul, for heaven's sake rouse yourself! Nina is gone!" he cried.

The words fell upon ears already prepared for them, and there was no accent of surprise in his tones as he said, simply, "When?"

"An hour ago! Just before sunrise. She went to the brook for water, and we have seen naught of her since!"

Paul made no answer, but hurried into his clothes and rushed down to the brook. The first hasty examination revealed nothing to justify his fears; but a second and more careful inspection of the soft soil by the brookside gave him the proof he had expected. There by the pool, where it was the custom of the women of the laager to fill their buckets, was the dainty footprint of his betrothed. Not far away was another impression in the soft mud. Paul stooped and examined it closely. It was the impress of a gigantic hand, the fingers doubled in toward the palm; and distracted as he was, Paul could not help noting that the size and shape of the finger-prints corresponded precisely to those found on the bodies of the victims of the Forest Terror.

A hundred feet away, in the direction of the woods, lay the empty bucket Nina had carried to the brook, and still further in the same direction was the broad-brimmed hat of rice-straw she had worn when last seen.

As a drowning man would grasp at a straw, Paul Adrian seized upon these crumbs of hope. Nina had not been slain outright, as had the other victims of the mysterious marauder, and he hoped that she might yet live. In half an hour a strong force of well-armed and determined men under the leadership of the almost frantic lover was making its way slowly through the forest toward the distant mountains—slowly, because the men were following the trail of the thing that hitherto had eluded all their efforts to pursue, even to see. Here and there a broken shrub or a fragment of cloth from Nina's frock gave them a clue; then, again, it would seem that their quarry had taken to the overhanging branches, and for a space no sign of a trail could be seen. But fortunately the encumbrance of its burden compelled the pursued to return to earth where the trees were farthest apart, and by widening their line of march so as to cover as much ground as possible they were enabled to follow their enemy's trail to the base of the mountain. Here the giant trees grew thickest and tallest. A network of vines and undergrowth, which had been growing more intricate as they progressed, now almost entirely obstructed their passage. At the same time the trail grew plainer, so that it could be discerned without difficulty, and the whole party pressed forward in a body, cutting their way through the entanglement with their hunting-knives.

Suddenly every hand ceased its work, and every man stood still as an image carved from stone. From somewhere in the depths of the jungle came that horrid, booming cry which all had heard before, on the night when Jan Ibsen met his death. To render it the more appalling, the sound seemed to come from no particular spot; its fearful cadences rang and reverberated through every recess of the forest until it seemed that the very leaves of the trees were breathing forth the horrid cry.

Jacob Strouss was the first to speak.

"Let us return while there is yet time," said he. "If we meet the Forest Terror face to face not one of us will live to tell the others' fate." His face was white as death save for a livid streak under each eye, and his teeth chattered audibly.

"Are you turning coward, Jacob?" said Paul, turning upon him fiercely. "I thought it not of you! Come, men, follow me!"

This was the last and only remonstrance, and let it be said in justice to Jacob Strouss that he was a man who feared no earthly thing. It was, to his mind, the intangible, unearthly character of the being they sought that wrought upon his fears.

With blanched faces and set teeth the men set to work again, and in the space of a few minutes had

reached a slight rise, where there was less undergrowth, and consequently a better view of their surroundings.

Hans Van Houten was the first to see it. "Look!" he cried; and following his outstretched hand with their eyes the others beheld a sight which chilled their blood with horror. There, suspended by a gigantic arm and leg from the network of tropical vines that formed an aerial roadway between two giant trees, was a great black bulk, a form so immense and awful in its aspect that the onlookers were for the moment inclined to doubt the evidence of their senses. But suddenly, as they looked, it left its perch, and with the agility of a cat, and so rapidly that the eye could scarcely follow its movements, descended to the ground. A creature enormous in its proportions, in some degree human, but more the incarnation of a hideous nightmare, stood, or rather squatted, before them. The hair which enveloped its body from head to foot, except the upper part of the face, was black intermingled with red. On the lower jaw, which protruded far beyond the upper, and was rendered more hideous by two enormous fangs, was a heavy beard. The eyes, black and glittering, glared at the intruders with savage fury, and one of the gigantic arms, fully six feet in length, with which the creature was wont to support the fore part of its body, kept waving menacingly in the air. The other was entwined about the insensible, but still unmutated, form of Nina Van Houten.

Paul Adrian turned to the men behind him, and though his face was pale as marble, there was not a quaver in his voice as he said, "Men, behold the Forest Terror! Aim with care, and guard the form of the girl! She may yet live!"

In another instant the flame burst from the muzzles of a dozen well-aimed rifles. As many bullets sped into the body of the thing before them, and with a repetition of the fearful yell, this time blended with the notes of mortal agony, the monster sprang wildly into the air, and fell back, beating the ground with its great body in the throes of death.

Nina Van Houten was found to be uninjured save for a few bruises and scratches incurred in her hurried transit through the forest in the arms of the beast—for such it proved to be—and a month later, when she had recovered from the prostration attendant upon her terrible experience, became Paul Adrian's wife.

The identity of the Forest Terror was for a long time a mystery to the inhabitants of the kraal, but some years later a traveling zoölogist, who chanced to visit the settlement, was shown the skeleton, which Hans Van Houten had insisted upon preserving despite the remonstrances of the village women, and the enigma was explained. Greatly to the relief of the good Dutch vrons, he claimed the relics as the meed of superior learning, and carried them off with him to Amsterdam, where in the museum the same may be seen to-day, introduced by the following placard suspended from one of the huge canines:

Pongo Simia, or Pithecus Wurmby, the Giant Orang of Borneo.

NERO

BY JAMES C. FERNALD

HE WAS a savage beast—or so he seemed as he rose behind the gate, resting his fore feet on the top bar, and barking, growling, and gnashing his teeth in our very faces when we first went to call on our new neighbors. We thought it would be a serious matter to have that fierce dog so near, and that we should always be anxious about the children.

But children are a perpetual surprise, and the unexpected happened. Suddenly our thirteen-year-old Ethel somehow formed a confidential friendship with the animal of which we were all afraid. He would walk gently beside her with her hand on his head, or lie on the lawn while she read, with an arm across his neck, pausing from time to time to give him a loving word, which he returned with a look of absolute worship. It was love at first sight, and outlasted every change. All the brothers and sisters entered into the inheritance. Nero adopted the family, laying aside all his ferocity to be a gentle and trusty companion for the little ones.

Soon the elders discovered what the maiden's intuition had divined—that Nero was a dog of remarkable intelligence and fine sensibility. He was of a black color, with smooth coat, nicely trimmed with tan. It was learned that he was a cross of a hound and shepherd, and he displayed quite amusingly the traits—now of one, now of the other—of his ancestral strains.

It took him some time to learn that Ethel's snow-white rabbits had any rights that a hunting-dog was bound to respect; but when once he had identified them with Ethel they were as safe as she, and could play freely about the lawn, while the dog looked over them into space, and with calm eyes and open mouth brooded on the mystery which his betters have never solved, of the likings of woman.

Then that hereditary enemy of his race—the cat—must be tolerated, because shielded by that sacred human presence. So the gray-striped pet was unmolested, but loftily ignored. Nero simply was not aware of any feline presence, even when Tiger tripped gingerly in front of his outstretched paws as he lay before the door.

In the orchard ranged a little flock of white fowls. Surely birds were game. But no; Ethel taught him somehow without a blow, but by expostulation, explanation and persuasion, that these also were connected with her diversified personality. So he carefully trotted

around among them, with only an occasional wishful look. But one day a flock of Brown Leghorns invaded the orchard. Then the hound heredity had free sway with a clear conscience. Those Brown Leghorns fled as before the destroying angel. One, wild as a partridge, rose and swept in a wide circle through the air, a manœuvre which leads the ordinary dog a hopeless chase on the ground. The hunting-dog simply raised his head, calculated the arc, sped with three swift leaps across the chord, and waited at the very spot where the feathered prey must descend into his open mouth. Only the sharp, stern command of the master saved the winged fugitive. The brown chicks never revisited that orchard.

Day by day he watched Ethel as she gathered the pearly, fragile eggs. He saw that they were precious to her. In one of his trips through the deep grass of the orchard he found a nest full of eggs, which a mother-hen had "stolen"—as we say when she carefully hides her own so that we cannot "steal" it. What was the discoverer to do? There was no doubt that those were the very dainty things that Ethel sought so carefully. How could he tell her that they were there? He contrived to gather up one of those eggs in his mouth, holding it, without crushing it, among those great white teeth. He carried it safely up on the veranda, and gently laid it down at Ethel's feet. To her ecstatic cry, "Oh, Nero, you dear, good dog! Where did you get it?" he responded by starting off, waiting to be followed, wagging his tail, and looking back, till he led her where the thirteen other white eggs gleamed through the green grass. How happy he was as she collected the treasures in her ready apron, and bore them in triumph to the house!

You must understand that Nero had quietly made a change of residence. He would still go to the old home to be fed. Then he would jump the fence, and come back to stretch out blissfully on our piazza. Soon we found that he was spending the nights there, too, for was not his adored one within, and must she not be protected? This was well enough in the summer, but when the cold weather drew on it became pathetic. Vainly was his old kennel fitted up with every comfort. He would desert it and lie out in the November wind on our porch. The boards were not hard, the wind was not cold, if he might only watch before Ethel's door.

At length the Burgesses took heroic measures, and fastened him by a strong chain to his comfortable lodging. Then he gave vent to his grief in melancholy howlings that produced universal insomnia in the neighborhood. Our five-year-old Tommy had an original explanation. Happening to be where some of Ethel's high-school friends were discussing music, he precipitated himself into the conversation with the remark, "If you want to hear a dog sing, you ought to come down to our house. It's the Burgesses' dog. They tie him up, and then he sings."

Then there came a night of restful silence, when his voice was no longer heard. Morning showed a silent figure on our side of the fence, the collar still about his neck, and the chain drawn tight across the palings. He had jumped the fence, chain and all, and only escaped strangulation by sitting up all night, on his tiptoes, with his nose pointed toward the stars. This was too much for his captors, and ever after they left him free. Then we took away a lattice from under our porch, spread a bed of clean straw within, and there he rested content.

But greater interests were preparing a change beyond his comprehension.

"Papa," said little Tommy one day, "is there any kind of writing that dogs can read? Nero doesn't know that we are going to move. I've told him, but he doesn't understand. If you lift up his ear, and speak right in under it very loud"—and Tommy had a voice of remarkable power—"he can hear you, but it scares him, and he'll go away."

The problem remained unsolved until Ethel settled one point. She must take Nero; and what she knew must be had a remarkable way of happening.

After all the goods were packed and shipped, the children were sent to the house of a friend a mile away, to wait until all was ready for them to travel. Nero was safely incarcerated in the Burgesses' cellar. But the moment the door was opened the next morning he disappeared, and burst in where the children he loved were at play, capering and leaping in triumph. He had traced out a scent twelve hours old, along a road where a constant stream of travel passed, to find his friends. After that there was no question of leaving him. The money was found to purchase his freedom, and soon he was duly installed in the new house on the hill. It was a quaint old place, in a wilderness of trees, with a long, shady lane running down to the trolley-road. Nero instantly took charge of all the externals of the establishment. Only of the externals, for one of his notable traits was that he would never cross the threshold of an occupied dwelling. When very eager to greet his friends, he would step over with his two fore paws, and sometimes in the effusiveness of greeting with one—never more than one—hind foot. Then the reproving words, "Why, Nero, you're in the house!" would lead him to step back in a humbled and conscience-stricken way that always won him new smiles and petting.

He had been bought to please Ethel. It remained for him to prove his own value as an investment. One fine spring morning the busy mother set off for the city, with her purse and various little packages securely clasped in her hand, but when the conductor held out an open palm before her she had not a cent to put in it. What had become of her purse? Getting a compassionate return ride, she started toward home, with small ex-

pectation of ever seeing her purse with its thirty dollars again. What was that in the shadow half way up the lane? A dog, surely. But if Nero, why did he not run to meet her? There he stood, nose to the ground, immovable as a statue, till his quick ear caught the light step. Then the white-tipped tail began to wave its greeting, and he would make little starts toward his mistress, but instantly spring back to the same guarded spot. There at his feet lay the purse, unsoiled and unplundered; and when he saw it again safely in its owner's hand he flew into the wildest antics of inarticulate joy. Knowing by some fine instinct that that choice thing must not be taken into his wet mouth, and that it must not be left long enough to allow him to go in search of help, there the faithful dumb creature had stood sentinel over the treasure till the owner came. From that time on his place in the family life was assured.

His character seemed to undergo a humanizing change. The ferocity was there, but under rational control. He recognized that certain persons had the right to come to the house. Any one with the mark of lady or gentleman might come unchallenged. Marketmen and regular dealers might come under his close personal escort, but the tramp was made to shiver with terror. Nero would stalk solemnly out, growling low, with every hair bristling, and white teeth gleaming through parted lips, and move in short circles between the intruder and the door until the poor wretch would turn and shamble away, with direful growlings following ten feet behind. One misguided adventurer stole softly to the front door; but the tinkle of the door-bell betrayed him, and when the young lady came to the door, Nero was patrolling with awful growls at the foot of the steps, and the trembling applicant had but one request, "Please call off your dog!" When that was done he hastily took his departure, and never cast a look behind him.

Wherever Ethel went, there went her devoted attendant. Through the wild-flower fields, through the shadowy woods, through the deserted iron-mines, strolled the bright girl, while joyful, alert, watchful, the black dog moved beside her, and father and mother knew that sooner than harm should befall her he would die for her.

It was soon discovered that whoever passed, Nero invariably slipped between his friend and the stranger. It was hard to see how it was done, so natural and unstudied did it seem, but each time there was the black-and-tan figure, still and close as a shadow, just where in an emergency he might be of use. On a certain dusky evening one of those coarse jokers who think it fun to practise on the nerves of a timid girl, hid behind a fence-corner, and burst out upon her with a shouted "boo!" But he met a "boo-oo-oo!" of which he had not thought, and leaped into his wagon with white teeth clashing close at his heels.

There was one domain where the human influence did not reach. Nero was a born fighter among his own race. A strange dog he simply would not allow on the place. Size or number of antagonists mattered little. Even if he was worsted, he made things so hot for the enemy that he did not have the same foe to fight again. At one time he came from a battle with two fierce assailants, bearing terrible wounds. While no one yet dared to touch him, Ethel came in. She went up and talked and looked sympathy upon him until she found the soft place in his heart. Then she procured a basin of water and a sponge and some strips of cloth, and washed and bandaged those gapping wounds without a protesting growl from the fierce sufferer. Every day she brought her appliances, sat down beside him, and dressed those wounds faithfully as a surgeon, until all were healed, leaving scarce a scar.

Time passed. Illness came. The bright Ethel lay long on the border land of life, and none knew whether love or skill could call her back. Through the shadow Nero became even more devoted to others of the family. Many a time the father started out for a lonely walk, wanting no living thing near him then. But on the board walk would be heard the patter of feet, and Nero would be at his side. Repressing the impulse to send him back, the sad-hearted man would give him a kindly word, and find a gentle cheer stealing into his heart from this loving dumb companionship.

At length came a strange incursion. From some unknown source a pack of fierce dogs, about a dozen in number, with two white brutes of gigantic size as leaders, took to ranging the country. They would suddenly appear at any hour of day or night, and as suddenly vanish. Mothers feared what might befall little children who might be borne down and mangled before help could reach them. Even strong men winced at the thought of meeting the pack "by moonlight alone." One morning the invaders swept through the lower land of the park, and after they had passed some workmen found a still, dark form. Nero had met his Waterloo. Unwatched, unaided, far from praise or succor, against overwhelming odds, he had fought his lonely battle to the very death. But he did not fall all in vain. The turf was marked with evidence of the long, desperate struggle. He had sold his life dearly, and beyond question sent the victors home battle-scarred. For some reason, at any rate, they returned no more.

Long after his brave life had ended his memory guarded the home. The tramp and the peddler would look askance, and pass at respectful distance the grounds he once had watched. Still at morning or evening the master will ever and anon listen wistfully for the pattering footfall and the eager greeting, and true hearts cherish the memory of the humble, brave, faithful, loving friend.

OUR FASHIONS

IN THE wane of one season and before the establishment of the styles of the next is a critical time for the fashion advisor. However, some of us are permitted a glance into the beyond by a favor of those who zealously hold down the curtain between. Those who wish to be ready for the beginning of the season welcome with avidity the slightest suggestion of the newer styles, and are willing to be the first in the ranks, no matter how extensive the change may be.

Everything the coming season points to a lavishness in the way of trimming. The severity of plain gowns is passing, and women now are willing to wear all the frivolities of the sex and be entirely feminine.

Lace, ruffles, ribbons and furbelows abound upon everything. Softer hanging fabrics will be very popular, and these always indicate more femininity. The days of stiff collars and masculine-appearing suits and hats are no more; and it is to be welcomed, also, for while we are women, let us be women, and leave all appearance of masculinity to the sterner sex.

All sorts of braid trimmings will be much sought, and they are to be presented in many beautiful and fancy weaves and in contrasting colors.

Trimming put on in points will be very popular. This effect has appeared in some of the late-summer costumes.

Astrakhan will be much used as trimming, and those who possess it are very fortunate, as, being a fur season, attempts will be made to introduce all kinds of furs. There is a distinguishing feature about a fur-trimmed garment which appeals to one in a very luxurious way. So utilize whatever you have in this line, confining yourself to one alone in an entire costume.

Many of the new skirts and waists are made in the "slot-seam" effect, illustrations of which have been given in a former number. As it is especially adapted to wool goods it will be carried far into the season as a favorite style. A fold of the goods is deeply laid and stitched on a short distance from the edge. The edges are then brought together with fagot-stitches of silk, or strapped over with bébe velvet, or made straps of the goods piped with a color, and buttons at the ends.

Many fancies in the way of made trimming will be brought out by the original modiste, and it is these very originalities that pronounce the artiste.

The unlined shirt-waist has come to stay. Ladies have become so accustomed to the separate waist and the comfort the shirt-waist affords that they are loth to go back to the tight waist except for very formal occasions.

The unlined shirt-waist is the delight of the home dressmaker, too, for with a well-fitting pattern any good needlewoman can fashion at home her own waists, thereby feeling free to invest in material for two or three rather than put the expense in hiring one made. This enables the woman deft with her needle to treat herself to a better material, even if of the lighter shades, for two or three visits to a responsible cleaner's will always make the material look new and fresh. A light color always cleans well, and then when past its prime can be colored a darker color. Tans are especially nice for this, as they always clean well, and afterward can be dyed beautifully.

A young girl can dress more economically by choosing a light-shade costume for the start, have it cleaned twice, then have it colored.

The little accessories to a woman's toilet are always the most expensive, but in their daintiness and the taste displayed are the "hall-mark" of the lady. You are judged more by your neck-finishings, your gloves, handkerchiefs and shoes rather than by the gown you

How to Dress

wear, as in these little things a woman shows her care in dressing.

To be well dressed is the desire of every one—every one according to her own circumstances—but the loveliest model of dressing can be ruined by a soiled neck-ribbon or a soiled and mussed handkerchief.

Toilet supplies should be carefully kept up, the same as you would keep up your larder.

The new fall goods are beginning to appear, and are very beautiful, both in weave and color. Fine French flannels and poplins will be used for the separate waist, and are shown in a great variety of colors and designs. Bébe velvets, small buttons and steel trimming will compete with each other for favor.

Stripes in a combination of gay colors are shown, also solid colors with lace stripes of white thrown up upon the goods.

Some very pretty hats have begun to appear, such as white felts, and felts in two colors—the top of one color and the underside of another color. A great effort has been made to popularize green, but it has met with but very little favor, although some have ventured to appear in it for a short time.



AUTUMN COSTUME



PROMENADE COSTUME

Some beautiful hats of black felt, with the rim of the doubled material quilted part of the way and left loose at the edge, showing the two edges, is one of the newest things, the trimming consisting of black velvet ribbon and black quills. These hats serve for between-season wear.

CHRISTIE IRVING.

WALKING-COSTUME

Many novelties for walking-suits are introduced this fall. One of the most popular, that bids fair to become a great favorite, is a black-and-white cheviot, known as "queen's mourning." It is a fabric particularly suitable for good all-round wear.

The walking-costume illustrated has a box-plaited skirt simply stitched, with a Norfolk jacket trimmed in the same manner. A velvet collar and cuffs are additional trimmings. With this can be worn a two-toned felt hat, white outside, with a band of black velvet and black quills, and a black underbrim. This is a very striking costume for a blonde.

PROMENADE COSTUME

One of the prettiest of the late season's styles can be seen in the illustration of the promenade costume. The material is a black mohair grenadine with a white silk stripe. The skirt is made with a cut ruffle, with three smaller ruffles at the bottom. Any of the skirt patterns can be used, as we cannot furnish the exact one of this. It has a full waist with the opening in

front, and a small girdle belt. It is presented more for the originality of the trimming, which is of white silk soutache braid made over the Battenberg patterns. This we can furnish. With it was worn a black floppy straw hat trimmed with white marguerites and black velvet ribbons. The parasol is in black and white. All of the small ruffles are trimmed with bébe black velvet ribbon.

The entire dress is to be worn over a black silk slip. It was by far one of the most stylish dresses seen. Being made walking-length it was very little care to the owner. It would serve as a pretty house-gown for evening wear during the winter.



AFTERNOON GOWN

AUTUMN COSTUME

Brown is one of the early autumn's most desirable colors. It lends itself in harmony with Nature, and with the introduction of a little gold is bright and attractive. Our illustration of an autumn costume is one of fine broadcloth in the new shades of brown, with bands of heavy moire and handsome buttons. These come in gold, with miniature flowers upon them, and are a conspicuous feature of trimming.

AFTERNOON GOWN

Dark materials flecked with white

and a dash of color are features of the late importations.

Our illustration of an afternoon gown is in wood-brown, with dashes of écreu and scarlet, and is trimmed with écreu lace. Fagot-stitching is used down the seams of the skirt. The blouse waist is a very desirable style, and the sleeves, while still remaining tight on the upper arm, are flaring a little more in the lower part of the sleeve; a little wider cuff is used, also. The lace is used on the sleeve above the elbow, also on the cuff and front of the waist.

GIRLS' SCHOOL SUIT

The cool days of September necessitate a little warmer dressing for little girls. It is not well to try to carry the summer dresses along too far in the season, as very serious colds are often the result of such mistaken economy.

The girls' school suit illustrated is a very pleasing and comfortable one when made of any of the pretty woolens, but is especially so in a dark rich red or brown, trimmed in velvet ribbon. A pretty gray trimmed in crimson velvet is a good style, too, as the hat can in this way be had to match it in color. For a little miss it is quite desirable to have the costume harmonious throughout.

CLOAKS AND WRAPS

Too many parents are tardy about providing suitable wraps for little girls early enough in the season. A cool or rainy day comes along, and to serve the emergency an old sack, probably outgrown, or a thin cape is brought to light to serve until a suitable one can be made at home or bought from the store. The time to make or buy these garments is in early September, as an ounce of prevention of colds is worth a pound of cure.



GIRLS' SCHOOL SUIT

Any of these patterns furnished from this office for ten cents. Waist and skirt can be purchased as separate patterns.

AUTUMN COSTUME.—Waist, No. 4017. Bust measures, 32, 34, 36, 38 and 40 inches. Skirt, No. 4223. Waist measures, 22, 24, 26, 28, 30, 32 and 34 inches.

AFTERNOON GOWN.—Waist, No. 4224. Bust measures, 32, 34 and 36 inches. Skirt, No. 4134. Waist measures, 20, 22, 24 and 26 inches.

WALKING COSTUME.—Norfolk Jacket, No. 4226. Bust measures, 32, 34, 36, 38 and 40 inches. Skirt, No. 4084. Waist measures, 22, 24, 26, 28 and 30 inches.

GIRLS' SCHOOL SUIT, No. 4211. Sizes, 2, 4, 6, 8 years.

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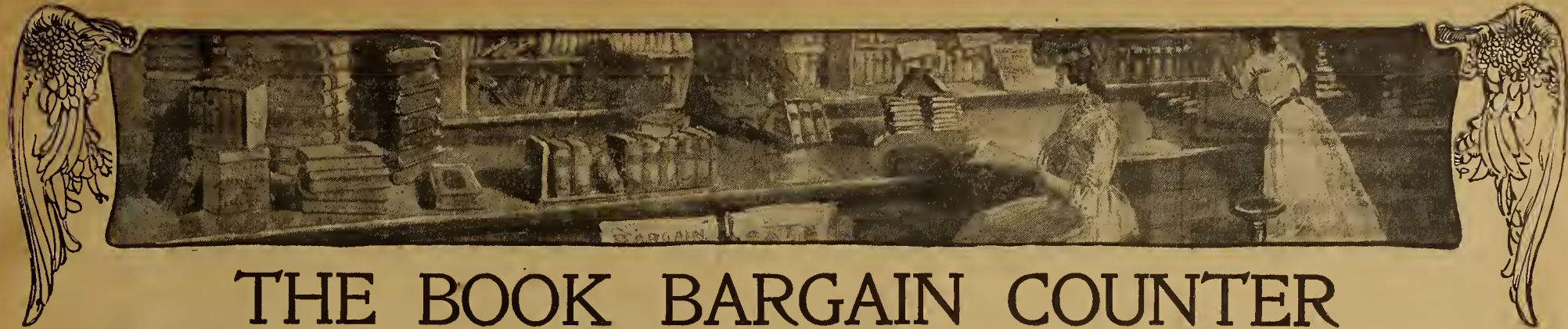
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Farm Selections

NEWS-NOTES

MR L. G. POWERS, director of the agricultural section of the twelfth census, says that it is safe to assume that the average consumption per annum of wheat by the American people is 5.25 bushels per capita, or what is equivalent to a little over one barrel of flour.

The United States Consul at Nin Chang, Manchuria, China, has found that owing to the deep red color of the Ben Davis apple and its superior shipping quality there is likely to be a brisk demand for it. As to quality it fully meets the popular demand. The apple-growers on the Pacific coast will no doubt plant this variety largely. The Ben Davis is a "Dago" apple—sells well on the street, and puts money in the strenuous apple-growers' pockets.

A prize of seven thousand one hundred and forty-three dollars has recently been offered by two of the leading agricultural and manufacturing associations of Germany for the best method of drying potatoes for feed for cattle, etc. Almost one half the German potato crop is now used as feed for cattle. Three and one half tons of fresh potatoes yield one ton of dried ones. One of the conditions governing the award is that the drier shall dry ten tons in twelve hours.

The manager of the Fresno, California, Fruit Canning Company has invented a plan for the removal of the skins of peaches by means of a solution which has been analyzed by Professor Hilgard, of the State University, and pronounced by him to be harmless. A series of revolving brushes removes the skins, and the rinsing process prepares the peaches for pitting and canning. It is stated that by this process four tons of peaches will produce as much canned fruit as five tons by the old method.

The Santa Fe "New Mexican" says: "The skin of the Angora goat is now coming into use also as a fur robe. When the hair is of one month's growth it can hardly be distinguished from the astrakhan if dyed black. Nearly all the buggy-ropes that are now sold as wild-animal fur are goatskins dyed, and the so-called monkeyskin muffs and cloaks are only straight-haired goatskins properly prepared. One of the most profitable uses that the skin of the Angora goat is put to is that of making trimming, which commands a price a yard equivalent to fifteen dollars for a single hide."

The California method of combating an early or late frost is effected by heating the lower stratum of air, thus diminishing radiation. Iron pots, each of which has a cover, and which are somewhat like those for burning charcoal, are used. Thirty-five are required for an acre, and this number will raise the temperature near the surface eight or ten degrees. Seventeen and one half gallons of crude oil are required. With each gallon of oil one fifth of a pound of cotton waste, costing about eight cents a pound, is used. Each pot usually burns steadily for about six hours. An electrical thermometer is arranged to alarm the foreman as soon as the temperature falls to thirty-four degrees Fahrenheit, when the fires are at once lighted. * * *

CATALOGUES RECEIVED

The Richmond City Mill Works, Richmond, Ind. Illustrated catalogue of the Richmond feed-mills.

The Barnes Manufacturing Company, Mansfield, Ohio. Illustrated catalogue of iron and brass hand and windmill pumps.

Davis Cream Separator Company, Chicago, Ill. Illustrated catalogue of the Davis hand and power cream-separators.

Arthur Williams, Secretary Denver Chamber of Commerce, Denver, Colo. Pamphlet describing the agricultural resources of Colorado.

The Herendeen Manufacturing Company, Geneva, N. Y. "Warmth"—an illustrated pamphlet on steam and hot-water heating by the Furman boilers.

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